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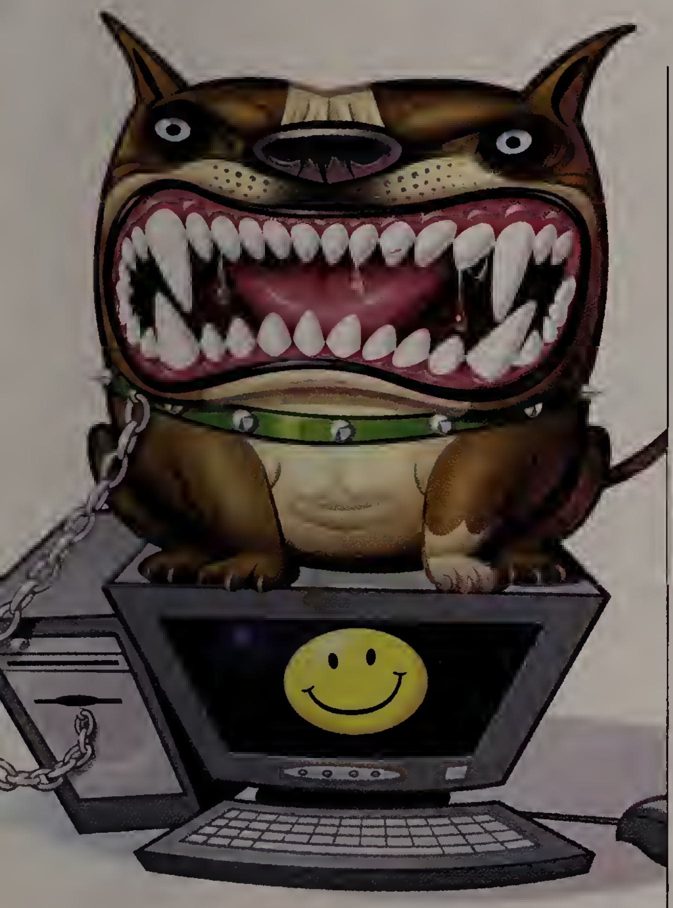
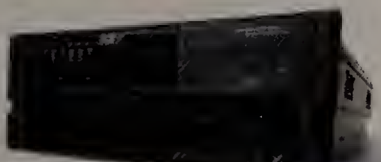


CLEAR CHOICE TEST:
INTRUSION PREVENTION

Cisco IPS 7.0 raises the bar

New global threat correlation feature boosts effectiveness of intrusion-prevention devices.
PAGE 28



The IPS 7.0 software can be deployed on Cisco IPS appliances in minutes.

Are HP, 3Com ready to trump Cisco switches?

BY JIM DUFFY

CISCO'S DOMINANCE IN enterprise switching is legend, but HP and 3Com have put together compelling product portfolios and value stories that add up to the first real competition the switch king has faced in years, and buyers are beginning to pay attention.

Quinnipiac University on Connecticut, a Cisco shop, recently upgraded its network with gear from 3Com. "Several of my peers were curious as to why we left the mother ship ... but it all fits into a risk-reward ratio," says Fred Tarca, associate vice president of information services. "We stuck with our fundamental principles of wanting a good product at the right price that is supportable, with a team and a company to back it up. Those requirements were met by 3Com."

> **"The fact that Cisco still carries the lion's share of the market means there's more value placed on things that Cisco offers."**
> ZEUS KERRAVALA,
> ANALYST, THE YANKEE GROUP

3Com and HP's ProCurve network group say their respective gear – much of it developed within the last few years – offers better overall value in terms of price, performance, port density and power consumption.

See **Switches,** *page 14*

Gaining IT skills on the cheap

BY DENISE DUBIE

WITH BUDGET CUTS draining away training dollars, IT professionals have to be creative in finding ways to keep their high-tech skills up to date.

"Training is almost always the first to go when IT organizations have to cut budgets, but that doesn't always mean employees or even unemployed workers can't update their skills without spending a lot of money," says Beverly Lieberman, a member of the Society for Information Management (SIM) and president of Halbrecht Lieberman Associates, an executive search firm.

According to IT professionals, keeping skills fresh will benefit the individual as much as the employer, so it makes sense for techies to take the reins of their professional development. And for those techies looking for work, prospective employers will appreciate the training efforts

See **Certification,** *page 16*

Nine storage companies worth watching

They're targeting memory virtualization, cloud computing and more. **PAGE 22**

Smarter technology for a Smarter Planet:

Can the boundaries of a business be defined by its people instead of its walls?

Businesses like nice solid walls, both the physical and the fire variety. But on a smaller, flatter, smarter planet, we increasingly find ourselves working with people far outside those walls: partners, suppliers, customers and remote employees.

IBM is incorporating new tools, like social software, wikis and presence awareness, throughout our entire collaboration portfolio—as well as new ways of accessing these tools through the cloud. Cloud-based solutions like LotusLive™ let your people work with whomever they want to, regardless of what side of the firewall they find themselves on, because they're backed by the legendary security you expect from IBM.

Now your organization can extend its collaboration infrastructure seamlessly without the cost and complexity of additional infrastructure. So you don't have to tear down your walls to reach beyond them.

A smarter business needs smarter software, systems and services.
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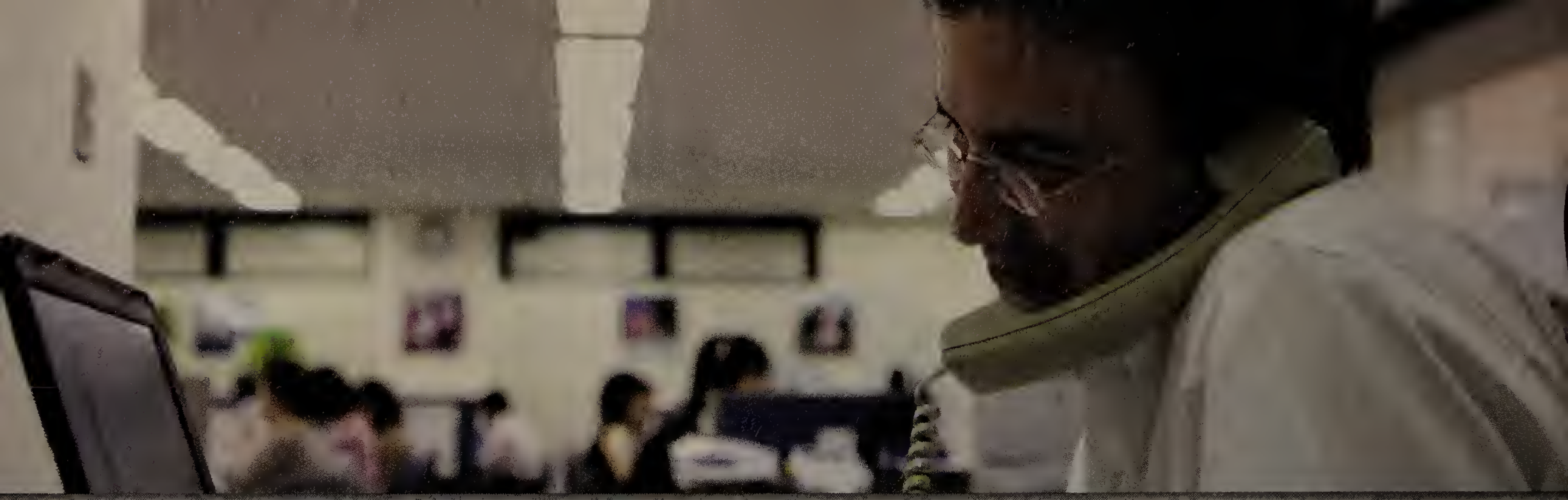

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STORAGE COMPANIES TO WATCH

Storage start-ups rethink data access

Memory virtualization, solid-state flash drives a cloud computing.

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Correction

In the recent Clear Choice Test of data loss prevention products, two facts about Palisade's Packetsure product were misrepresented. Contrary to the assertion that Packetsure "seems to have a phone home functionality enabled right out of the box," this is a user-enabled VPN function that can be useful when calling tech support or even with initial setup. And Packetsure can scan and hash the usual range of files that most of the others support, not just flat files.

RICHARD BORGE

CONTACT: Network World, 492 Old Connecticut Path, Framingham, MA 01701-9002; Phone: (508) 766-5301; E-mail: nwnews@nww.com; **REPRINTS:** (717) 399-1900; **SUBSCRIPTIONS:** Phone 877-701-2228; E-mail: nww@omeda.com; URL: *www.subscribenww.com*

GOODBADUGLY

Ethernet services thrive despite recession

A gloomy economy hasn't stopped the growth of the Ethernet services industry, as a new study from Infonetics Research finds that global revenues grew sequentially by 36% in 2008. Overall, the study found that Ethernet service revenues totaled $16.9 billion last year and Infonetics says it expects revenue to double to $33 billion by 2013. In addition to strong Ethernet service growth last year, the study also found that global Layer 2 and Layer 3 IP MPLS VPN service revenue increased by 16% in 2008.

Not so fast on PC acceleration standard

A standards group says it has delayed the release of a new bus specification that could help PCs run faster by speeding up data transfer rates. The PCI-Special Interest Group earlier stated that the PCIe 3.0 specifications would be released in 2009, with products based on the specification appearing in 2010. The base specification will now be released in the second quarter of 2010, and products could come out one year after that, said Al Yanes, president and chairman of PCI-SIG.

The hacker's version of "What goes around..."

Kevin Mitnick, the ex-hacker turned security consultant, is such a high-profile target himself that the Web-hosting firm he was using finally told him it wouldn't host Web pages for him anymore. "They kicked me off," Mitnick says, noting he doesn't begrudge Hostedhere.net, which he used for five years. But after a number of break-ins that targeted the former hacker, "they decided it wasn't cost-effective to keep me around," Mitnick says, adding, "I'm a target," mostly for those who want to play "king of the hill" by hacking someone once known as a notorious hacker. But Mitnick hasn't been left Webless, as another hoster has stepped in to offer Mitnick a refuge for the basic advertising he does online for his consultancy.

Dumping IE6 could be a hard sell

Re: 'Kill IE6' campaign gains force; 30M Web users get switch pitch (http://tinyurl.com/m4ak5g):

There are a lot of corporate IT folks who are constrained by anything from application functionality to investment in securing their systems from browser-based attacks.

They're not going to rush into IE-X because cool site developers find that it takes additional work to code for IE-whatever. The IT staff find it hard work to get predictable and secure results from anything involving Microsoft and/or the Web. They like it when the environment remains stable for a few years.

At home, I can (and do) pick something else. With thousands of desktops and hundreds of applications here, it's a different story.

I agree: deal with the environment you chose. If you don't want to support IE6 you can choose to ignore the people working from a constrained environment. We can take our business someplace else. It's a free market.

GJL

Two views of Palm vs. iTunes

Re: Palm files complaint with USB board over iTunes connectivity, and risks alienating Pre users in the process (http://tinyurl.com/me7ge4):

This is silly. A software vendor is free to write software that works with someone's hardware; why shouldn't a hardware vendor be free to design hardware that works with someone's software?

Apple is complaining because they designed iTunes to work better with iPods than with anyone else's hardware, and so now someone has made hardware that behaves just like an iPod. That's hardly a surprise.

Anon

There is no reason to reproduce a piece of software that the consumer likes. As a hardware manufacturer they are much better off leveraging the positive public opinion of the software by making their hardware compatible with that software.

The bone-headed path is trying to recreate what already exists and works adequately.

zunguri

Braindumps: Cheating yourself

Re: Why is passing CCNA so difficult? (http://tinyurl.com/m7u4sz):

I passed the first two MCPs in my MCSA using braindumps before I realized I was cheating myself and setting myself up for a fall. Anyone who relies on braindumps without learning the technology will find themselves out of a job pretty quick and rightly so.

The reason I and many others value Cisco certs so much is that hands-on experience is essential for success. I found that a combination of study guides, videos, sims, emulators (if you have access to IOS images) and rack time (if you have hardware access or can rent it) served me very well. This is borne out by the fact that when I took the CCNA exam I met a tech support analyst that when asked what kit he had worked on, bragged about the fact he had read the book and test king docs and was confident he would pass as working on the kit wasn't necessary. He scored 640, I scored 961.

My case rests.

Future CCIE SP

Don't put all eggs in one ISP basket

Re: After links to cybercrime, Latvian ISP is cut off (http://tinyurl.com/kjg994):

If you really want to do evil, put your valuable assets anywhere, but access them through secure tunnels from disposable owned computers worldwide.

Yes, there are things that require relatively "fixed" addresses but you can distribute those fixed addresses covertly in coded/obscured form through things like USENET and blog posts or even fake Craigslist ads.

Putting a lot of your eggs in one basket is simply asking for trouble.

Knowingly holding a lot of rotten eggs like "bulletproof" ISPs do is a sure way to be shunned by responsible users.

Anon

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ONLINE NEWS EDITOR: Michael Cooney
ONLINE NEWS EDITOR: Paul McNamara
ONLINE ASSOCIATE NEWS EDITOR: Ann Bednarz (612) 926-0470

Net Infrastructure
SENIOR EDITOR: John Cox (978) 834-0554
SENIOR EDITOR: Tim Greene
SENIOR EDITOR: Ellen Messmer (941) 792-1061
MANAGING EDITOR: Jim Duffy (716) 655-0103

Enterprise Computing
SENIOR EDITOR: John Fontana (303) 377-9057
SENIOR WRITER: Jon Brodkin

Application Services
NATIONAL CORRESPONDENT: Carolyn Duffy Marsan, (317) 566-0845
SENIOR EDITOR: Denise Dubie

Service Providers
SENIOR WRITER: Brad Reed

Print Layout/Web Production
MANAGING EDITOR: Ryan Francis
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CONTRIBUTING EDITORS: Daniel Briere, Mark Gibbs, James Kobielus, Mark Miller

networkworld.com
EXECUTIVE ONLINE EDITOR: Jeff Caruso, (631) 584-5829
COMMUNITY EDITOR: Julie Bort, (970) 482-6454
PROGRAMMING DIRECTOR: Keith Shaw, (508) 766-5444
EDITORIAL OPERATIONS MANAGER: Cheryl Crivello
OFFICE MANAGER, EDITORIAL: Pat Josefek
MAIN PHONE: (508) 766-5301
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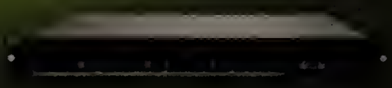

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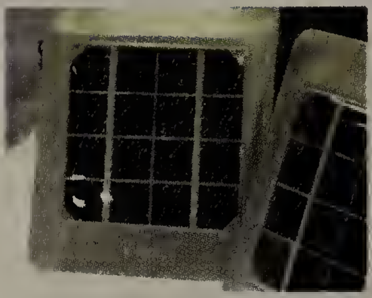
BLOGOSPHERE

Is your resume being sold by recruiters to other recruiters or companies? Blogger Larry Chaffin was given a tip about the problem of recruiters posting fake jobs; this was just to get a 1,000 or more resumes to sell. He says there is a nice business going on now in this area. To see what would happen he made up three resumes of fake people. The first was a CIO with 20 years of experience in big companies and a list of published articles. The next was a three-time CCIE who has been doing networking for 15 years and had project management experience. The last was an entry-level candidate with a few certifications and administrations jobs. He posted for jobs that the resumes would fit and some that the resumes were overqualified for. He looked at the positions that said remote position/work from home office with a national telecommunication company or fortune 100 companies. Also he applied for architect, engineer and executive jobs as well. He applied for around 70 jobs. Being just right or overqualified you would think we would get a call, but no, we got e-mails saying sorry but you did not meet the qualification of the position. Within three days we started to get e-mails and calls to our temp cell phone from people we did not know or jobs we applied for while doing this project. They said they were forwarded our resume and had a low-level position for a three-time CCIE. We turned it down but after the first call we started to get a lot of calls and e-mail from India, China, Canada and other countries. Our resume was sold to these recruiters all over the world. ***http://tinyurl.com/ngvwv8***

Porting apps to mobile devices: Pandemic business continuity or scariest security risk ever?! Blogger Ryan Trost says the porting of internal applications to mobile devices has gained increasing support from business continuity committees and executives, primarily to maintain work flow (i.e. revenue streams) during a disaster recovery fiasco that would keep employees from traveling into work. Up until this year disaster recovery scenarios keeping employees at home were mostly hypothetical exercises required by contractual, regulatory or audit requirements. But when the highly contagious outbreak of Swine Flu (A/H1N1) spread throughout the globe, it gave disaster recovery committees the leverage it needed to transform internal apps onto highly mobile devices. At the surface, this sounds like a step in the right direction. But it's a really bad idea. Unless you're a techie who prides himself on using ridiculously hard passwords, the typical user will be protecting all those corporate secrets using the password 1-2-3-4. ***http://tinyurl.com/l4geca***

ITVIDEO Interviews, the Coolest Tools and More



IDG NEWS WIRE

Reviving dead gadgets

Eneloop uses the sun's rays to rescue gadgets from what would be the trash heap through the use of solar energy.
http://tinyurl.com/ma455v

IDG NEWS WIRE

Hacking the Defcon badge

The annual hacker's convention set up a badge that was a challenge to its attendees to break into. It includes a microprocessor.
http://tinyurl.com/n7cojo

IDG NEWS WIRE

Leafing gas behind

Nissan has unveiled its all-electric car called the Leaf. It can go up to 90 mph, and would need to be recharged for hours through a household hookup.
http://tinyurl.com/p9jstv

Best of NWW's NEWSLETTERS

Legal considerations affect cloud decisions

Legal considerations are an important part of cloud security, especially when it comes to how government agencies can demand data stored in cloud providers' networks. The protections from search and seizure that data has when it is held directly by its owners is different from the protections it has if the data is stored in the cloud, according to presentations at last week's Black Hat security conference. Data stored on PCs in their owners' homes can't be demanded without a subpoena being served to the owners, they said. The same data stored in a service provider's network can be demanded from the provider without going through the owner, the Black Hat speakers said. So the data, which could remain available to its owner, might also be copied to law enforcement authorities, but the owner wouldn't know it. Service providers might tell the owners, but wouldn't have to, they said, and they might be prevented from telling.
http://tinyurl.com/mao759

Security strategies: My case study involved me personally when I was a law enforcement officer. The case began when an 80-year-old woman reported to a law enforcement officer (LEO) that an unknown person had taken more than $100,000 from her bank account. The victim stated that she had the money in her account one day, and the following day it was missing. She had not reported the missing money to the bank, just to the LEO who went to the bank to investigate the case and was immediately met with resistance. The manager came in and stated that he would just refund the money and that an investigation would not be necessary. He stated that the bank could not stand the negative impact that the case would have on the bank's reputation. The LEO demanded that the manager of the bank cooperate in the investigation and told the manager that the person responsible would be held accountable for the crimes. As it turned out, the teller who had her workstation next to the controls for the entire camera system was the culprit. She had a friend who had worked for the victim and who had stolen checks from the woman. When this friend arrived at the bank, the teller turned off the cameras and cashed several checks as if the victim had come in herself, even writing the victim's driver's license number onto the checks. The two women who were responsible were both arrested.
http://tinyurl.com/nmcnja

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XML flaw threatens apps

Vulnerabilities discovered in XML libraries from Python Software Foundation, Sun Microsystems and Apache Software Foundation could allow denial-of-service attacks on applications built with them, according to security test toolmaker Codenomicon and the Finnish Computer Emergency Response Team. "The vulnerabilities can be exploited by enticing a user to open a specially modified file, or by submitting it to a server that handles XML content," the CERT-FI advisory said. Neil MacDonald, a vice president at Gartner, warned companies not to ignore the danger of attacks that exploit the library flaws. "Hackers are moving up the stack to the application level," MacDonald said. XML-based attacks can be expected to be "the next big thing for hackers," MacDonald said. ***http://tinyurl.com/m887t3***

Cisco posts Q4 decline but sees promise. Cisco's revenue fell 18% in its fiscal fourth quarter ended July 25, hitting $8.5 billion, while its net income dropped to $1.1 billion, or 19 cents per share. Revenue for all of Cisco's main businesses was down significantly from a year earlier, with routing hurting most at 27% lower. But CEO John Chambers said the company saw positive signs during the quarter that could signal a rebound in the world economy and the company's business. "We believe there is a good chance we will look back and see that the tipping point occurred in our business in Q4," Chambers said. Cisco is ahead of its goal to cut $1.5 billion in annual expenses, and it plans to get more aggressive on the acquisition front now that it has reorganized its management structure to better support the 30 "market adjacencies" it is trying to tackle, Chambers said. ***http://tinyurl.com/mhtb9***l

Rollercoasters go high-tech. Behind the vertical dives and loop de loops of today's rollercoasters are cutting-edge computer systems that thrill riders and keep them safe. The newest rides use sensors, Ethernet control systems, wired and wireless networks as well as digital audio and video. The newly opened Hollywood Rip Ride Rockit (pictured below) at Universal Orlando Resort, for example, features an onboard audio system that lets riders choose the songs they want to hear during the coaster ride. On Manta, the newest thrill at Sea World Orlando, sensors along a 3,359-foot track and on the trains communicate with Programmable Logic Controllers while computerized special effects simulate the coaster hitting water. Head online for more details on these and other attractions that made our list of the nation's top tech rollercoasters and rides. ***http://tinyurl.com/mzlsqq***

IBM gets $16 million for brain-on-a-chip technology. The quest to mimic the best parts of human brain function on a highly intelligent computer is heating up. IBM last week received $16.1 million to kick up its part of a Defense Advanced Research Projects Agency research program aimed at putting brain-like senses into hardware and software. IBM is part of a program known as Systems of Neuromorphic Adaptive Plastic Scalable Electronics, which includes researchers from HRL Laboratories and HP. According to DARPA, the SyNAPSE program will create useful, intelligent machines "capable of analyzing vast amounts of data from many sources in the blink of an eye, letting the military or civilian businesses make rapid decisions in time to have a significant impact on a given problem or situation." ***http://tinyurl.com/mde77e***

The manta rollercoaster in Orlando has computerized special effects to simulate the coaster hitting water.

Windows president downplays Win 7 bug. Microsoft's Windows Division President Steven Sinofsky last week tried to temper concerns that Windows 7 RTM has a critical flaw that can shut down the operating system by running a simple command. "Of course [we] always want to investigate each and every report of any unexpected behavior," said Sinofsky, who took the unusual step of responding via the comments section of an industry blog that posted a recipe to execute the crash and included a picture of the results. But Sinofsky, who is leading Windows 7 development, said Microsoft has not reproduced the reported crash, which is triggered by the Windows "CHKDSK /r" command. "We are certainly going to continue to look for, monitor, and address issues as they arise if required. So far this is not one of those issues," he wrote. Reports of the bug came a day before Microsoft made Windows 7 available to MSDN subscribers. General availability is slated for Oct. 22. ***http://tinyurl.com/lmbeav***

Google to buy On2 Technologies. Google has reached an agreement to buy On2 Technologies in a stock deal worth about $106.5 million. On2 offers video compression technologies used in Adobe Flash Player, VoIP, mobile video and embedded devices. The deal shows Google's interest in pushing forward video technologies on a variety of mobile devices and through set-top boxes, says Gartner analyst Andrew Frank. The acquisition gives Google access to video compression software without paying licensing fees for MPEG's H.264 standard and will allow Google to move forward with video projects without any "bottlenecks," Frank said. "Video in the living room and video on the go are going to be major thrusts for Google in the future." ***http://tinyurl.com/nw93km***

High-end clustering tool is reworked for the enterprise. A company that develops workload management tools for high-performance clusters is bringing its products to the commercial data center, where it says it can help companies schedule jobs and allocate computing resources more efficiently. Cluster Resources — which is changing its name to Adaptive Computing —makes the Moab software tools widely used in high-performance clustering environments, including 12 of the world's 20 biggest supercomputers. The company's new product, the Moab Adaptive Computing Suite, is designed to manage transactional applications where demand fluctuates throughout the day. Used in conjunction with virtualization software, the software can boost server utilization rates by an extra 20% to 40%, depending on the application, the company says. ***http://tinyurl.com/nk22s2***

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Finding treasure in social networking

BY JOHN FONTANA

It may just be that the Gen Y kids fueling the Web 2.0 and social networking craze know exactly what they are doing.

The "what" is creating an interconnected Web of relationships that fosters the sharing of ideas, uncovers expertise, and brings data out of hiding to solve problems or fuel projects.

Corporate users are taking notice, NASA and Booz Allen Hamilton among them, because those are just the results companies coveted but couldn't get a decade ago when knowledge management was a buzz word and a project failure inside many organizations.

"Explore these [social networking] technologies because the Gen Y kids are probably right," says Chris Howard, vice president and research directory for the Burton Group. If history is any indication, social networking could become the next instant messaging, which grew from a teen-girl chat service into a core element of corporate unified communication systems.

"You have to focus on the business value and de-emphasize the cool factor," Howard said at the recent Burton Group Catalyst Conference.

That is what NASA is doing both externally —with Web-facing portals, virtual worlds, Twitter, Facebook and LinkedIn — and internally with blogs, wikis, workspaces, and social networks interconnected with content, document and records management systems.

"We want to be where everybody else is, we want to be part of the party, too," said Jeanne Holm, chief knowledge architect at the NASA/Jet Propulsion Laboratory in Pasadena, Calif. "Part of what we are looking at is what are the benefits internally" with social networking.

Those benefits now include accelerated peer-to-peer communication and problem solving, collective intelligence built by capturing knowledge from individual workers for re-use by others, and providing context to communication to help with decision making.

Holm wants to go from just one person working on a problem to perhaps thousands.

"The way people are sharing information now is through the social connections they are making and there is a lot of tacit knowledge there."

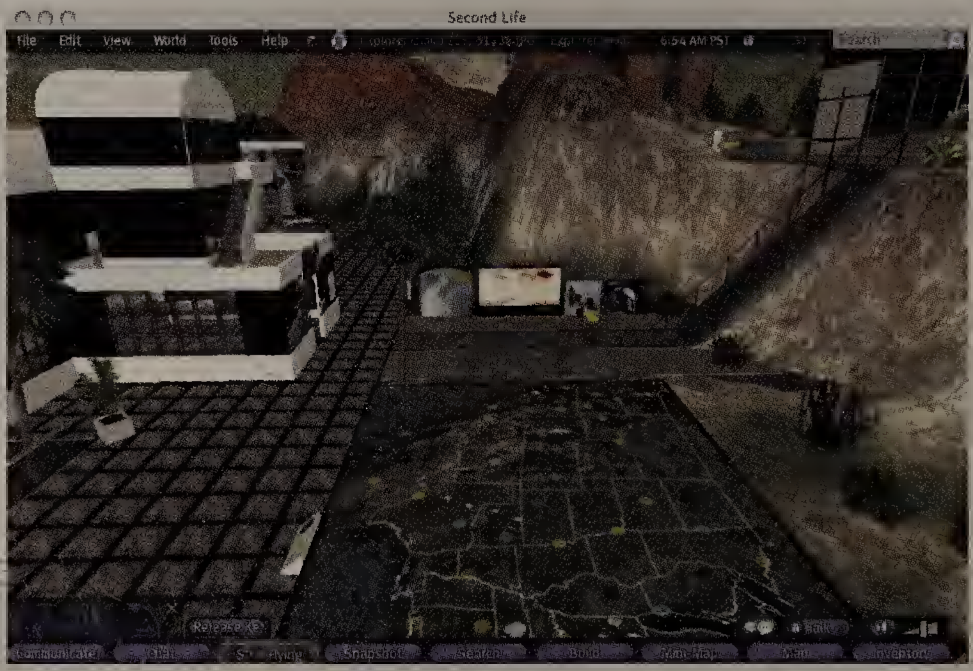
NASA's internal social network started out with users talking about the network itself, but the chatter soon turned to questions scientists and others were seeking to answer.

They headed to the social network and Holm said the result was that 93% of the answers came from people who were in a different NASA center then the questioners, which was proof that the network was breaking down geographic barriers and unlocking potential.

Holm's knowledge management team is now working on a project called Spacebook that combines profiling and networking together with the content used to help make decisions. It also includes a records management component.

"It was difficult to share information from one part of NASA to another, so we looked at fixing those problems," Holm said. Then they worked on integrating knowledge distributed throughout the space agency.

Holm said social networking was judged as something beneficial and providing a return on investment for what NASA was trying to do.



As part of its social networking efforts, NASA, in partnership with NOAA, streams real-time weather data via Google Earth into the Jet Propulsion Laboratory's Explorer Island in Second Life.

She said when people connect in an open way it can be captured and shared while still having private spaces for conversation. "We want to find people's expertise and we want to capture that. In the future, we want to model that knowledge."

The knowledge will be used to support ongoing and future projects such as robotic outposts on Mars, interstellar missions and permanent space colonies.

Booz Allen Hamilton is another convert to the powers of social networking. The company's internal social network, Hello.bah.com, is providing easy access to key data and fueling employee collaboration that has broken silos formed among 23,000 employees.

Launched 10 months ago, Hello.bah.com has gone from just over 10,000 logins per month to more than 60,000 today and from 4,000 users per month to more than 10,000.

"We were blown away by the uptake," said Walton Smith, senior associate at Booz Allen Hamilton and leader of the project. "We've discovered that the enterprise 2.0 approach is a methodology and not a technology implementation plan. We had to be agile."

Hello was up in less than six months with wikis, blogs, profiles, single sign-on and SSL VPN access all built with open source tools and some commercial software.

"We had silos of information with the same people working on the same stuff. We needed to unlock that tacit knowledge," he said.

They did by focusing on end users and giving them easy-to-use intuitive tools to add information.

"They used it not because it was a benefit to the firm but because it improved their work. And then we could aggregate that content," Smith said.

The common element was a profile and that became a foundational piece for collecting data and making connections.

Key to success was targeting workers with five to 15 years of experience. Those workers had the knowledge that made the value of the system skyrocket out of the gate.

"We knew we had won when HR started to build their on-boarding class [for new employees] around Hello," Smith said. This year 5,000 new employees will begin their employment via Hello.

Smith said a change management strategy was vital to learn to work together differently and that education centered not on the tools but the concepts.

The company defined its internal social strategies, aggregated data from existing sources, listened to users, and kept departments such as legal and HR clued in.

"The Feedback Box is the most critical thing we have," Smith said. Users whose ideas are incorporated into Hello are credited on the site.

Smith said adoption was aided by building tactical strategies, tapping into existing communities and managing new communities visibly and openly, and creating examples of how work can be done.

"We are in the process of doing an ROI study, but the good news so far is that the cost is low," Smith said. ■

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■ **Switches,** *from page 1*

Ron Sege, president and CEO of 3Com, says the H3C enterprise equipment his company is bringing out of China was built from the ground up in the last four years using the latest ASIC and other technology advances.

The company is trying to use its success in China to convince domestic buyers to give it another chance after it pulled out of the North American enterprise market twice. "We already have a million routers installed in China, half a million switches, and common management for the whole range of gear," Sege says.

China uses the H3C equipment to power eight out of 12 national backbones, including its transportation, education and energy networks, Sege says. "We're selling value in most cases but value based on cost to operate. Lower cost up front, less expensive to operate over time and higher performance to boot."

But will value be enough? Cisco has more than 70% of the market and says, no matter how individual boxes line up, its ace in the hole is low total cost of ownership, something it achieves with its cohesive, overarching product architecture.

To see if the value stories hold water we started by examining product cost and found that in some cases — not all — switches from HP and 3Com do cost considerably less than comparable Cisco offerings, at least on a starting list price level. For instance, 3Com's S7500E and S7900E modular multilayer 10G and Gigabit switches cost $8,000 less than Cisco's Catalyst 6500.

But it is, of course, hard to do an apples-to-apples comparison. Cisco says the Catalyst 6500 supports three times as many 10G Ethernet ports than 3Com does on the 7500E and 7900E. But 3Com claims the VSS1440 version of Cisco's Catalyst 6500, which Cisco says takes the system's switching capacity to 1.44Tbps, is mostly marketing rhetoric.

"Although claiming 1400 Gbps, (it) is mostly a redundancy scheme," says Dominic Wilde, 3Com's senior director of Global Product Line Marketing for Networking Products. "It does not increase bandwidth as only one supervisor is active."

3Com also claims the Catalyst 6500, with a Supervisor 720 engine, only delivers half the throughput of the 3Com 7500 and 7900 switches for IPv4 packets.

Cisco, meanwhile, claims the 3Com switches and HP's high-end 5400 and 8212 systems line up better with the Catalyst 4500 — even though 3Com and HP aim their offerings squarely at the 6500. The 4500 E-series chassis ranges in price from $995 to $12,495 while bundled pricing for the 4500 is $11,000 to $18. Cisco says an entry level 4500 costs $200 per gigabit Power over Ethernet Plus port.

"We primarily compete with them on the 4500," says Rajiv Ramaswami, vice president and general manager for Cisco's Data Center Switching Technology Group.

But value is not based on price alone.

"There are different ways to measure value," says Zeus Kerravala, an analyst at The Yankee Group. "One of the big (aspects) of the value chain for Cisco is the base of Cisco certified engineers out there. You can actually pick up the Yellow Pages to find them. The odds of finding a 3Com or HP guy are long."

Rob Whiteley of Forrester Research agrees. "If you have an army of (Cisco certified engineers), there's going to be a learning curve [if you add other suppliers] and that is the No. 1 reason why the ultimate TCO is a bit more of a wash. The people cost is an order of magnitude more expensive than some of those other costs."

But HP says the cost of a Cisco SmartNet maintenance contract alone over five years could be more than a new HP ProCurve network.

"We have had customers who basically said, 'I can replace my entire network with ProCurve just by the cost of a Cisco SmartNet maintenance contract," says Sreeram Krishnamachari, HP ProCurve product marketing manager.

HP and 3Com may have a better value proposition at branch office sites, where a wiring closet switch can be purchased for a reasonable price, easily deployed, and then not updated, upgraded or even thought about for the next five years, Kerravala says.

Other aspects — such as power consumption, total cost of ownership (TCO), operational expense and so on — also play key roles in determining the overall value of a network deployment. Another thing to examine are the switch features themselves; how much functionality do you get when you purchase a switch? Do you have to purchase an additional software license to get the functionality you need? Or are you paying for capabilities that you don't need?

"Value is in the eye of the beholder," Kerravala says. "The fact that Cisco still carries the lion's share of the market means to me there's more value placed on the things that Cisco offers than what HP and 3Com offer. But HP's share has grown a lot [of late]. Their message around TCO and things like that have resonated."

Kerravala expects HP to continue to take share from Cisco and for Cisco to respond by dropping prices.

"This may be a time for customers to really benefit based on the fact that these two companies are going to go toe-to-toe," Kerravala says. "Cisco's going to try and keep share, HP's going to try and take it. The big winner here is going to be the customer."

HP still doesn't have a data center core switch to take on Cisco's Nexus 7000. But 3Com says it does —the S 12500, which debuted last spring at Interop.

Cisco quotes a 15Tbps capacity for the Nexus 7000 but 3Com says Nexus won't hit that mark for another 12 months. Wilde says the S 12500 will achieve 13.3Tbps by then.

But Cisco counters that the S 12500 is just not in the same league as the Nexus 7000. The Cisco switch was built not only for Ethernet switching, but for converging storage protocols such as Fibre Channel, and optimized for "enabling and driving" virtualization, Ramaswami says.

"It is specifically for data center convergence, which we believe our competition does not have," Ramaswami says.

Cisco says the real value is in the overall system and architectural role of its switches.

"There are multiyear investments" customers are making in Cisco switches, Ramaswami says. "You're comparing platforms against point products." ■

Modular Switches

	Cisco	HP	3Com
Switch name	Nexus 7000	NA	H3C S12500
Total capacity	15Tbps	NA	13.3Tbps
Ports	512 10Gig	NA	512 10Gig
Price	$75,000		$60,000
Switch name	Catalyst 6500	ProCurve 8212zl	H3C S7500E/3Com S7900E
Total capacity	1.44Tbps	691.2Gbps	1.5Tbps
Ports	260 10Gig	48 10Gig	84 10Gig
Price	$24,000	$24,000	$16,000
Switch name	Catalyst 4500, 4500-E	ProCurve 5400zl	H3C S7500E/3Com S7900E
Total capacity	320Gbps	691Gbps	1.5Tbps
Ports	34 10Gig	48 10Gig	84 10Gig
Price	$995 to $18,000	$2,300 to $14,000	$16,000

For more switch comparison go to http://tinyurl.com/ng9nw6

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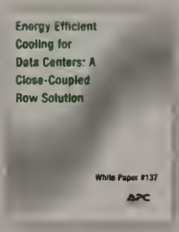
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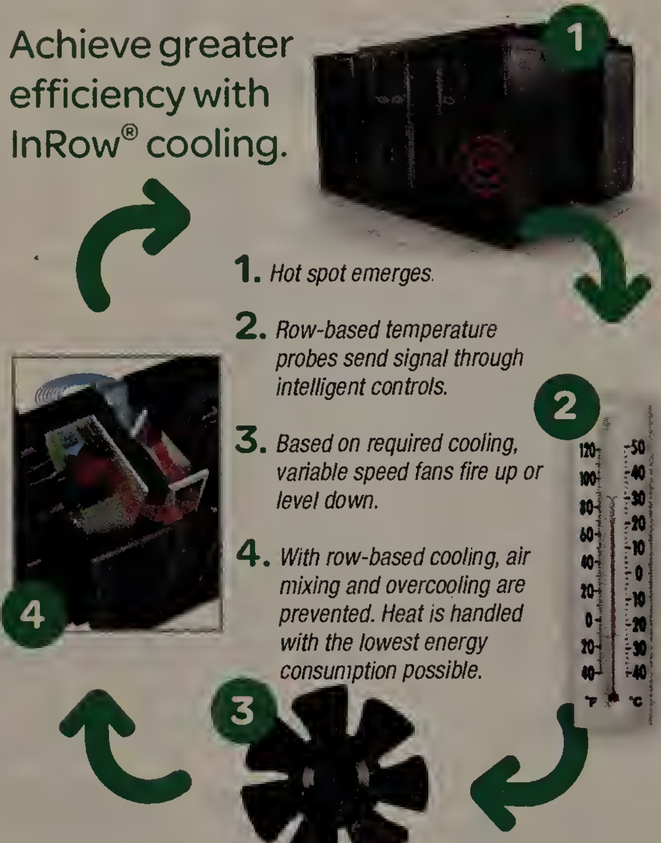

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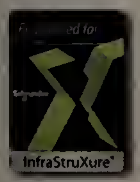

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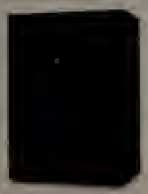

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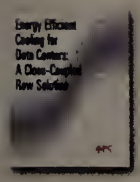

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Certification, *from page 1*

made during a candidate's downtime. Here we highlight five ways IT pros can get certification-level skills on the cheap.

1. Split the cost with employer

IT professionals working full-time, but faced with no training budget, could argue their case to employers — and offer to split the cost in a mutually beneficial arrangement.

"Many companies today are still having a hard time filling skills gaps, and it would cost more to bring in a new hire than to train an existing one in the skills that are lacking," Lieberman says. "It is not out of the question for IT pros to negotiate with their employer for training dollars that will ultimately help both parties."

For some, specific certifications are required for certain positions — which would give an employer more reason to help fund the training effort. Colt Mercer, network engineer at Citigroup in Dallas, says Level 1 engineers are expected to have their Cisco Certified Network Associate (CGNA) accreditation within three months of being hired. In Mercer's case, he and others are scheduled to get Cisco Certified Internetwork Expert training by 2010, but he wants to see that happen sooner.

Gartner recently put out IT workforce data that showed a majority of CIOs don't plan to hire new staff in the coming months, but the research firm advises employers to invest in existing staff to ensure a successful recovery when the recession abates.

"Employers need to continue to invest in career development and human capital management planning, even during the recession, because when things start to return it will be extremely costly to try to hire new staff with skills or expertise in enterprise architecture or SAP, for example," says Lily Mok, vice president in Gartner's CIO Research organization.

2. Techie, train thyself

IT professionals can gain a wealth of knowledge from self-study if they're disciplined enough to devote the time and energy to online courses, books, videos and Webinars.

"Self-based training kits allow you to do it at your own pace and schedule the studying when you have time," says Dwayne Whitmore, senior systems engineer in the technology services group for Carolinas HealthCare System in Charlotte, N.C.

Whether techies buy self-study kits on their own or get their employer to foot the bill, choosing to broaden skills during personal time can provide the flexibility many people need. For instance, reduced or eliminated travel budgets could be seen as a barrier to training, but online or self-study can provide the information IT pros need without requiring them to spend cash on work trips.

Which IT certifications are hot?

Security certifications factor heavily in Foote Partners' latest ranking of the hottest IT certifications, published in July. The research firm's list is culled from data including IT budget trends and growth in pay for IT skills over the past six months.

1. GIAC Certified Incident Handler
2. EMC Proven Professional Technology Architect - Expert
3. Citrix Certified Integration Architect
4. HP/Master Accredited Systems Engineer
5. Cisco Certified Security Professional
6. Check Point Certified Master Architect
7. GIAC Certified Forensics Analyst
8. GIAC Certified Intrusion Analyst
9. EMC Proven Professional Implementation Engineer - Expert
10. GIAC Certified Incident Manager

Matt Barber, network analyst at Morrisville State College in New York, is working on the Certified Wireless Network Administrator (CWNA) certification from CWNP. "My workplace purchased the self-study kit, which includes their official textbook, sample tests and questions, and the cost of the exam all for only a couple hundred dollars," Barber says. "A week-long training seminar or course would have been hard to justify, but the kit was very affordable.."

For Michelle Lange, who works in WebSPOC Project Management at ValCom in Itasca, Ill., buying the books that explain the best practices of ITIL helped her self-train. She bought ITIL Version 3 books off eBay for $30, and she purchased Network+ training books at Barnes & Noble.

"My employer offers limited reimbursement options," she explains. "I'm sure there are others out there who are forced to be thrifty with training options."

3. Build your own network using free stuff

For IT professionals, building a home lab could help progress their careers. And according to techies who have already done it, the process can be inexpensive.

Stacey Hager, a network administrator at a legal firm in Charleston, W.V., says he put together a home network in his garage with used parts and software made freely available from vendors. The availability of a network helped him while he was unemployed last year. Plus, now that he has secured a new tech position, the lab gives him the chance to learn technologies not directly related to his job functions, Hager says.

"EBay is my friend. I buy second-hand equipment, and for a modest amount — about $400 — I have scraped together a home lab that is conducive to Microsoft and Cisco self-training," Hager explains. "You can even get a VMware server for free and train yourself on that technology, which all employers are looking for and if you can say you trained yourself while unemployed, they will like it more."

Citigroup's Mercer also recommends using available open source tools to round out a home network.

"There are two open source projects called Dynamips, for simulating Cisco networks, and Olive for simulating Juniper networks," Mercer says. "I am not talking about the software that gives you a command line with limited command support. I am talking hardware emulators: full-blown Cisco and Juniper operating systems supporting all the features a router supports."

4. Provide tech services for cheap

Another means of homing skills is using them. IT pros, working or not, can offer their tech know-how to friends, family or via a small side business for low or no-cost to exercise their tech muscles during the downturn.

"High-tech workers can offer their services for free and use that experience on resumes and in interviews to show potential employers that they didn't let their skills get stagnant," SIM's Lieberman says.

Citigroup's Mercer engages in freelance technical work to keep skills sharp. He says the work not only makes him more appealing to potential employers, but also serves as the beginnings of a potential consultancy business if his employment situation changes.

5. Shop for bargains

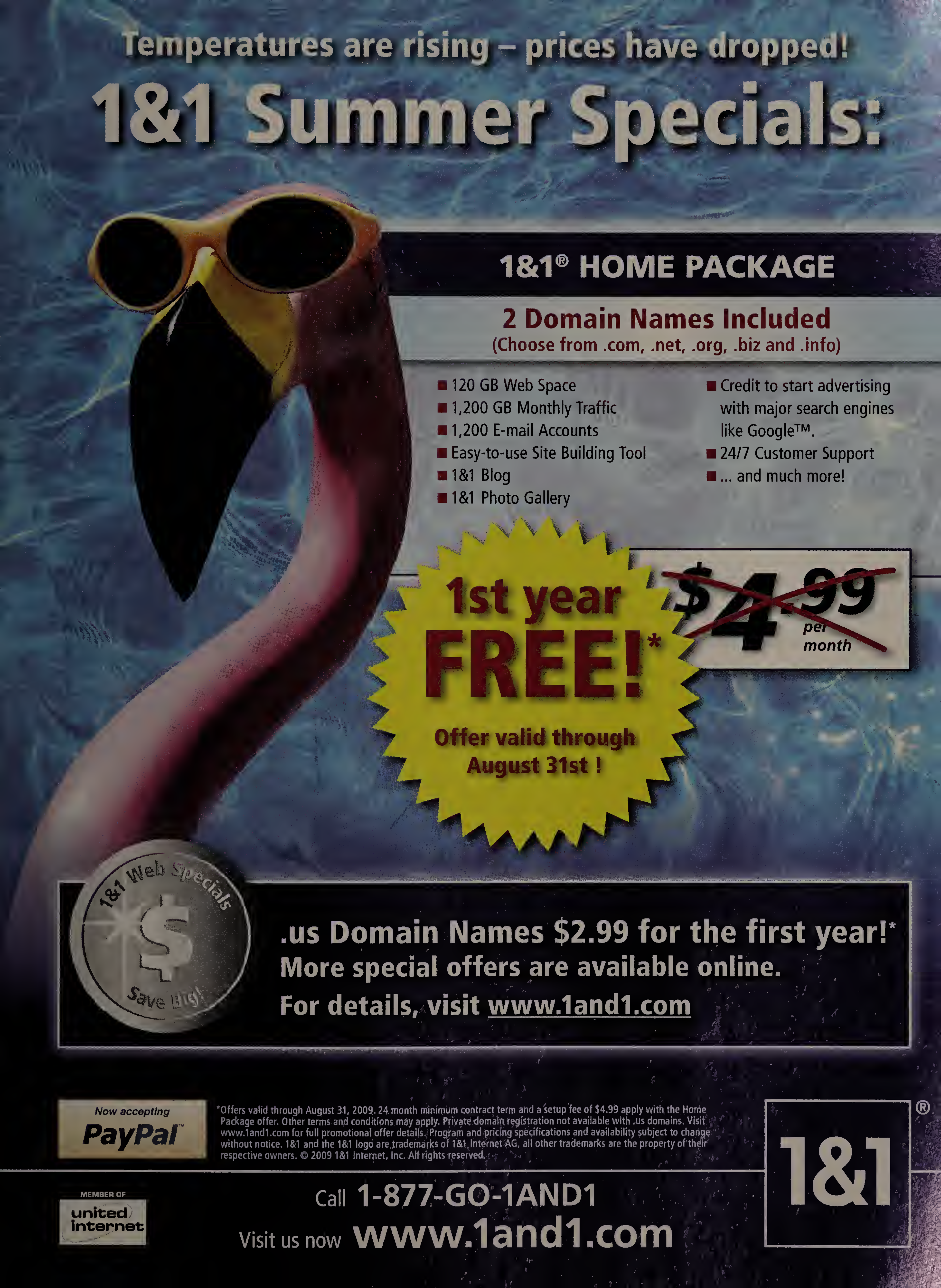
IT pros should also remember that the economy is not only hurting their companies' businesses, but also impacting training firms and vendors.

Bryan Sullins, principal tech trainer at New Horizons in Hartford, Conn., says firms like his and others are offering "recession" pricing on training packages that won't last when the economy returns.

"As soon as the economy recovers that won't happen again," he says.

And don't discount vendors as a good source of free training, Mercer says. He has a meeting with Oracle planned that he says will serve as an educational experience for him.

"Oracle is going to do a presentation on Oracle security, and that will be my free training," he explains. "They might be trying to market stuff, but for me it's free training because I can't get that type of information on my own." ■



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NETINSIDER BY SCOTT BRADNER

The birth of an activist FCC?

THE LATEST NEWS out of the normally sluggish FCC is quite a change of pace. Just three days after *The New York Times* ran a story on Apple refusing to carry Google Voice in the iTunes App Store for the iPhone the FCC started asking questions about it. Yes, the FCC was looking to dance without even waiting to be asked. I'm a bit worried for the toes of its reluctant dancing partners.

According to press reports, the Google Voice rejection had happened a few weeks earlier but the news broke on July 28. On July 31 the FCC sent letters to Apple, Google and AT&T asking some pointed questions about what happened. As far as I can tell no one formally asked the FCC to get involved this time. (The FCC had been asked by Skype in February 2007 to take a look at the same sort of thing.)

But that request seemed to fade away after the FCC asked for comments on Skype's request, which the FCC had assigned the identifier "RM-11361." There were press reports at the time that the FCC had rejected the request, but that might not be the end of the story.

The FCC asked Apple why the Google Voice application had been rejected and if Apple had acted alone. It also asked whether AT&T had anything to do with the rejection, what power AT&T has over which applications are accepted, what other applications have been rejected and why.

Apple may have its work cut out for itself to explain how the evaluation and approval process runs since, by all reports, Apple has raised capriciousness to an art form in the way it runs the App Store.

The FCC asked AT&T some of the same questions about its power over what is accepted in the App Store, asked about any other VoIP applications running on other AT&T phones, and inquired about any limitations AT&T has stuck in user agreements.

Finally, the FCC asked Google for a description of Google Voice, what Apple had told Google about why Apple had said no to the application, what other applications Google had in the Apple App Store and what process Google uses for applications in its own App Store for Android phones.

In each case the FCC also asked some other questions, but the above list covers the high points. The FCC asked for answers by Aug. 21, and told the companies that they could ask for parts of their responses to be kept confidential as long as the requests met federal requirements.

Meanwhile, the FCC has opened an exploration about handset exclusivity. This effort was assigned the identifier "RM-11497."

The reason I bring up the identifiers is because the FCC cited both of these efforts in the opening paragraph of its letters about Google Voice.

The FCC said, "In light of pending FCC proceedings regarding wireless open access (RM-11361) and handset exclusivity (RM-11497), we are interested in a more complete understanding of the situation."

Sort of looks like the Skype request is not quite as dead as it looked. I will say that I'm of a rather mixed mind on this new FCC activity. As a general rule government regulations do not make the world go smoother.

But sometimes they are needed — for example, rules against lead paint on kids' toys. I can see where rules from the FCC that limited the reasons that an Apple or AT&T could block applications and usages of networks would be a good thing but rules limiting what you and I can do with that connectivity would not be.

Disclaimer: Part of education in a place like Harvard is to let students know that there are rules. But I've not seen a university opinion on the FCC's rulemaking prowess, so the above worry is mine alone. ■

Bradner is Harvard University's technology security officer. He can be reached at sob@sobco.com.

EYEONTHECARRIERS BY JOHNA TILL JOHNSON

The battle over voice, the war of UC

LAST WEEK, I wrote about the possible implications of the new lineup of FCC commissioners. They certainly haven't wasted any time: On Aug. 3, the FCC launched a full-scale investigation into the decision by Apple and AT&T to reject Google's voice application for the iPhone. As Sanford Bernstein telecom analyst Craig Moffatt notes, "The issue of application suppression affords the Administration a back door route to Wireless Net Neutrality, something that has been openly espoused by new FCC Chairman Julius Genachowski."

Stay tuned. But note this is even bigger than net neutrality, or even Google vs. AT&T. This is about defining the nature of communications services and how they're offered — a battle that's bigger than just the question of what applications are available on which phones.

The question is over the nature and ownership of next-generation unified communications architectures. Converging voice, data and video onto a common network and set of platforms creates a colossal power struggle over infrastructure real estate. Companies that never previously considered themselves competitors now find themselves at each others' throats.

One example: Wireless devices. As 4G arrives — there are rumors that Verizon will be delivering long-term evolution (LTE) services as early as next January — the distinction between "phones" and "computers" pales. A device with a wireless connection and the ability to handle voice calls as well as data messaging and video is as likely to be a netbook as a phone. That means the Motorolas and Nokias are now competing with the Dells. (Apple wins either way.)

Another example: Enterprise unified communications. Microsoft is now heavily competing against Avaya and Cisco to serve as the unified communications platform of choice. In Microsoft's vision, voice is just another application that runs over OCS. For the networking folks, that vision is flawed, because data- messaging infrastructures aren't able to handle the performance requirements of real-time voice. (I've been advising clients for years to steer clear of Microsoft's grandiose claims around voice support.)

And that brings us back to AT&T and Apple vs. Google. Here you have a service provider, a device vendor and an applications provider — and each one's eyeing the other's infrastructure turf. Interestingly, right after the FCC announced its inquiry, Google CEO Eric Schmidt resigned from Apple's board, saying the two companies were now competitors.

Now, some of this is Google's propensity for injecting FUD (fear, uncertainty, and doubt). Google's an absolute genius at launching competitive moves designed to throw companies off-guard, and then profiting from the subsequent confusion. (Watching Microsoft — the former king of FUD — play defense against Google's tactics is endlessly entertaining).

But bringing in the FCC does more than inject FUD into the fray. It's a nice way to get two birds with one stone: launch a process that will likely culminate in the imposition of net neutrality, and accelerate Google's UC land grab. In other word's, it's a poke in the eye to AT&T, Apple, and Microsoft — all in one fell swoop.

It's going to be an interesting couple of years. ■

Johnson is president and senior founding partner at Nemertes Research, an independent technology research firm. She can be reached at johna@nemertes.com.

SAL'S POINT OF VIEW

The Real Stuff.

Financial services firms like ours are very dependent on the use of email and Web connectivity to conduct our business. As the Director of information technology I have to make the security of those channels my top priority.

And as the use of the domain name system to conduct attacks, steal data and interrupt business has increased, so has our need to monitor our communication channels. In this new environment, using standard command line tools to detect and fix critical problems, particularly in a crisis, is no longer an option. It's time consuming and costly. And frankly, that's time I don't have and a cost my firm can't afford. Like any smart IT guy I look for the most efficient solution to solve a problem. That's why I absolutely depend on DNSstuff to stay on top of my domain management responsibilities and fix a DNS problem fast in a crisis. DNSstuff is rock solid and reliable; an every day tool that I can't afford to be without. I can make DNS changes quickly, manage my domains with ease, and run a report in seconds. And DNSstuff's 24 hour alert service helps me detect critical changes before my users do.

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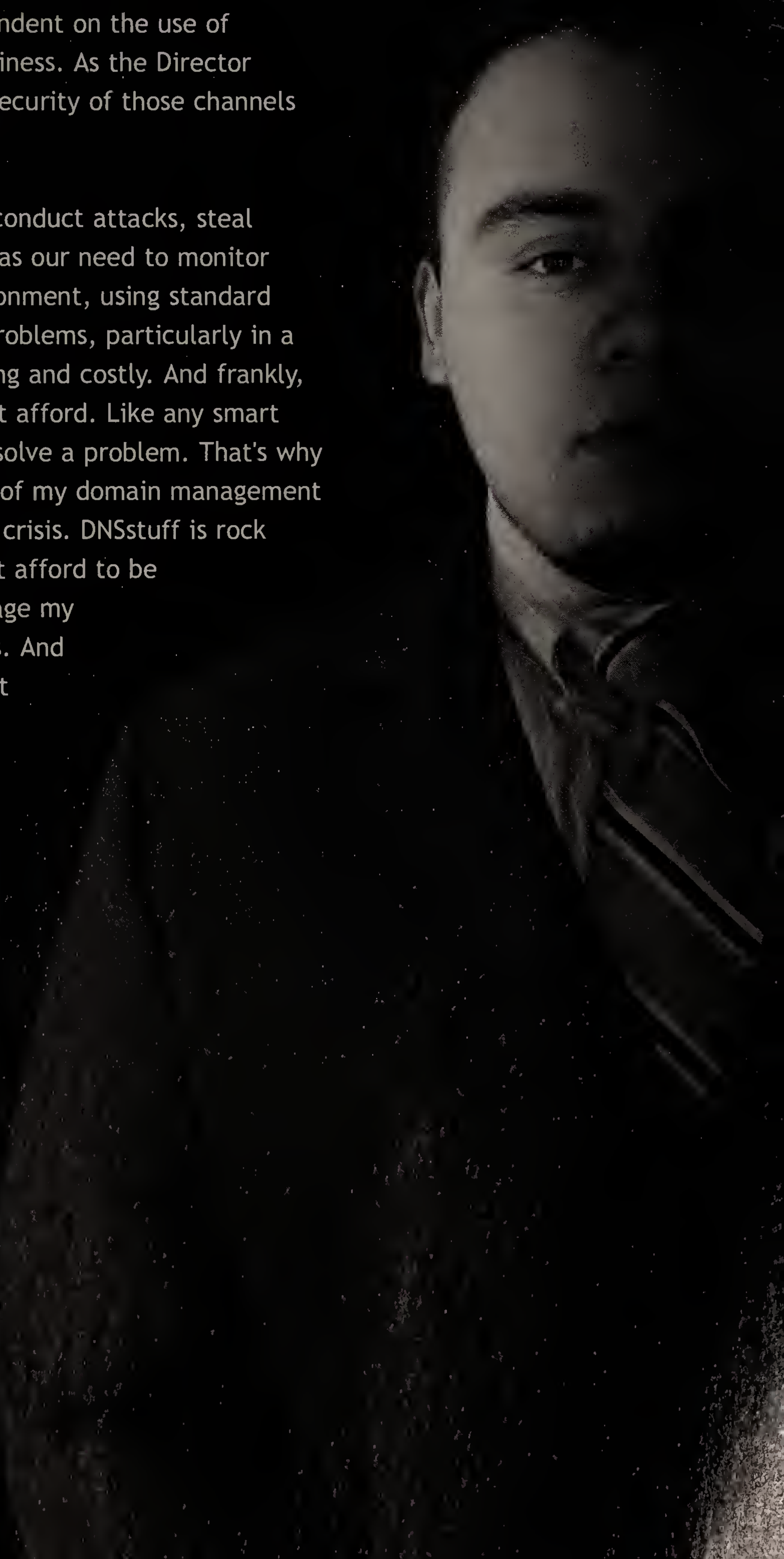

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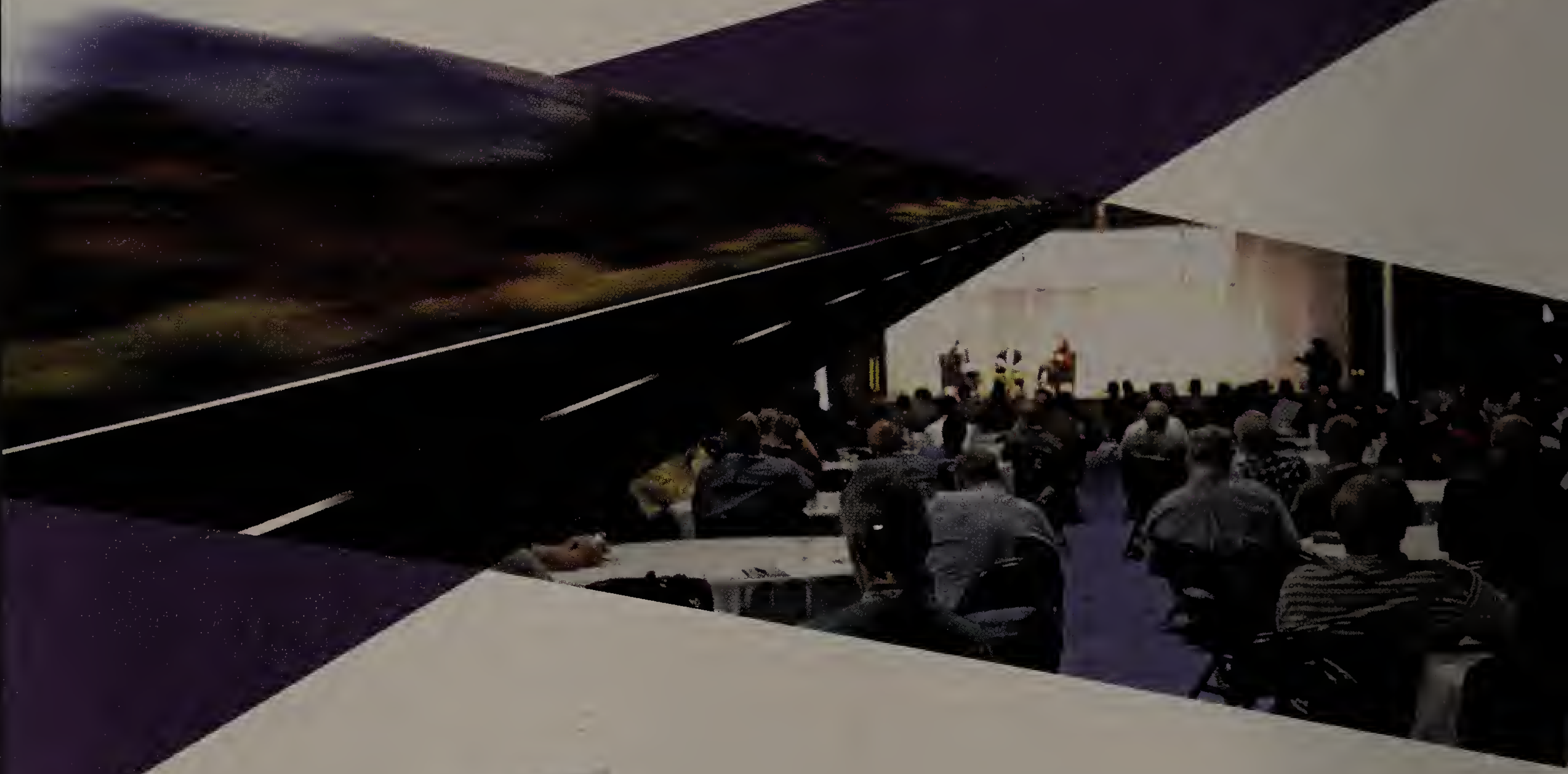

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Nine storage companies to watch

Flash memory, virtualization and cloud computing targeted by storage companies

RICHARD BORGE

BY JON BRODKIN

Building a data storage start-up in this economy is quite a challenge, but there is room for innovation in an industry suffering from inefficiency and massive growth in data volumes. These nine data storage start-ups are trying to address such problems with technologies including memory virtualization, flash-based solid-state disks and cloud storage.

AutoVirt

Founded: June 2007

Headquarters: Nashua, N.H.

What it offers: AutoMove, an automated data migration software package for Windows shops; AutoClone, which speeds up the replication and movement of Windows data; and AutoMap, which maps a customer's distributed IT environment.

How company got its start: AutoVirt founders wanted to focus on midrange businesses that lack the sophisticated data movement and management tools available to larger enterprises.

Why it's worth watching: The inefficiency of network-attached storage (NAS), the rapid growth of data and even the economic downturn are all factors that could potentially help AutoVirt succeed, according to an IDC profile on the vendor. Storage inefficiency will not be tolerated in a recession, IDC notes. "Senior management will demand remediation that will include reorganization of network shares and resulting data migrations from one location to another, the sweet spot of the AutoVirt solution," IDC says.

How company got its name: AutoVirt is short for automated virtualization, in reference to its file virtualization technology.

CEO: Josh Klein, previously president and COO of IT consulting and services firm GlassHouse Technologies, has also held executive positions at EMC and IBM.

Funding: $8.5 million from Kepha Partners and Sigma Partners

Who's using the product: Five Point Capital, Children's Hospital Boston, Harvard University and others.

Cachengo

Founded: April 2009

Headquarters: Berthoud, Colo.

What it offers: Cachengo offers cloud storage that is similar to Amazon's Simple Storage Service, but focuses heavily on de-duplication and continuous data protection by combining off-site storage with a locally installed appliance. Cachengo's Director 100, the appliance, is a file server that supports the CIFS, NFS and ISCSI protocols.

How company got its start: Founder and CEO Mike Young said he was "irritated at the industry" for approaches that led to more product segmentation and higher prices.

Why it's worth watching: Cachengo is hopping aboard the fast growing cloud storage bandwagon, but pairing the service with an appliance that it says combines the features of primary storage, backup storage and disaster recovery into one system. "They're doing something pretty cool," says analyst Tom Trainer of Analytico. "They're essentially caching data and sending it off to the cloud."

As a small company, Cachengo might struggle at first with customers "who are fearful of investing in nascent technology," Trainer says. The vendor is pursuing a two-pronged business strategy by targeting both the small and midsize business market as well as fellow vendors who want to base their own cloud backup services on the Cachengo appliance and hosted service.

How company got its name: The name is cache-n-go without the hyphens.

CEO: Young was previously CTO of the storage appliance business unit at Xyratex.

Funding: Self-funded

Who's using the product: Cachengo has several customers in the financial, healthcare and semi-conductor industries.

RNA Networks

Founded: September 2006

Headquarters: Portland, Ore.

What it offers: RNA Networks virtualizes memory and shares it across servers, with products including RNAmessenger, which is designed for trade executions that need low latency and high throughput; and RNAcache, which creates a shared, network-attached cache of virtualized memory.

How company got its start: The founders were looking for a way to deliver data to applications faster without overhauling existing systems or sacrificing CPU cycles.

Why it's worth watching: Latency is the enemy of many applications, particularly those used in the financial services, energy and high-performance computing industries targeted by RNA Networks. RNA's memory virtualization aims to eliminate this latency and provide new levels of flexibility by creating shared pools of memory, which let an application access its entire working data set in memory, instead of from a lower tier of storage.

How company got its name: RNA, or ribonucleic acid, acts as a messenger of genetic information, and RNA Networks considers itself a messenger of data in the data center.

CEO: Clive Cook, former CEO of VeriLAN, a wireless network services provider; and Elematics, a small software company that focused on data transmission in telecom networks.

Funding: $7 million from Menlo Ventures, Oregon Angel Fund, Divergent Ventures and Reference Capital

Who's using the product: Several paying customers and others in the testing phase.

SandForce

Founded: June 2006

Headquarters: Saratoga, Calif.

What it offers: SF-1500 SSD Processors, which use commodity NAND flash memory and enhance reliability and endurance to make them suitable for an enterprise data center.

How company got its start: Founders Alex Naqvi and Radoslav Danilak wanted to create a less expensive way to provide enterprise-class flash memory.

Why it's worth watching: Because of performance and reliability issues, most enterprise flash products use single-level cell flash chips instead of the multi-level cell chips used in consumer devices. But single-level cell chips are considerably more expensive. That's why several vendors, including SandForce, are developing management tools that improve the speed and reduce wear and tear on multi-level cell technology.

Gartner says it "remains to be seen" whether SandForce can fulfill the promises it is making, but that its products have "the potential to quickly and dramatically reduce the price of enterprise-grade SSD solutions and accelerate a more widespread adoption of solid-state storage

See **Storage,** *page 24*

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Storage, *from page 22*

technologies."

How company got its name: SandForce is a play on SSD (for solid-state disk) and NAND.

CEO: Naqvi, CEO and co-founder, previously founded Luminous Networks, which was acquired by telcom equipment provider Adtran; and held management positions at Intel and other IT companies.

Funding: More than $20 million from DCM, Storm Ventures and several undisclosed storage companies

Who's using the product: SandForce's technology will ship later this year from OEM vendors, the names of which are undisclosed.

Scale Computing

Founded: October 2007

Headquarters: Indianapolis, Ind.

What it offers: SN 1000 and SN 2000, storage nodes which use Scale's clustered file system to create storage-area network (SAN) or NAS systems with commodity hardware.

How company got its start: The founders were trying to build a supercomputer for less than $60,000 using commodity hardware, and needed a clustered file system and storage, and discovered a problem: they couldn't find 5TB of appropriate storage for less than $50,000.

Why it's worth watching: With clustered systems lacking a single point of failure, Scale can offer reliable Tier 2 and Tier 3 storage for prices starting at $11,000. Forrester Research analyst Andrew Reichman notes that Scale will face stiff competition from Dell EqualLogic and HP LeftHand, but it offers the advantages of low cost and native NAS capabilities.

How company got its name: The name refers to scalability of computing resources.

CEO: Jeff Ready was previously CEO and co-founder of Corvigo, an antispam appliance vendor acquired by Tumbleweed Communications.

Funding: $5 million from BlueChip, Springmill, CID and State of Indiana 21st Century Fund

Who's using the product: Customers include a Fortune 500 telecom company, and others in the legal and health-care industries.

Simply Continuous

Founded: October 2006

Headquarters: San Francisco

What it offers: Data Recovery Vault, a hosted service that integrates with a company's backup infrastructure and replicates data to a collocation facility. A second service known as AppAlive recovers entire applications, rather than just data.

How company got its start: Co-founders Tom Frangione and Chris Eidler launched the venture after seeing that many users struggle to find a cost-effective disaster-recovery service.

Why it's worth watching: Simply Continuous could appeal to midsize businesses with its service-level agreements, and functionality that exceeds what's offered by consumer-oriented Web backup products. It will be interesting to watch how the company reacts to the EMC acquisition of Data Domain, because Simply Continuous designed its first products for customers using Data Domain's backup technology. But company officials say their partnership with Data Domain will continue within the EMC hierarchy.

How company got its name: Simply Continuous indicates simplicity in data recovery, and the need for business operations to be continuous.

CEO: Frangione was previously CEO and co-founder of Telephia, which was sold to Nielsen for $400 million in 2007.

Funding: $10 million from Greylock Partners

Who's using the product: Vocera, Scout Labs, Savvion and others.

Tarmin

Founded: June 2006

Headquarters: Ongar, United Kingdom

What it offers: GridBank, software that automatically moves data from primary storage to less expensive secondary storage or third-party cloud platforms, assisting the process of long-term data preservation. The software also can quickly find and retrieve files in e-discovery or recovery situations, according to Tarmin. A new partnership allows Tarmin's software to integrate with the cloud storage platform offered by vendor Nirvanix.

How company got its start: Founder and CEO Shahbaz Ali, who was previously responsible for MasterCard's worldwide archiving and content retention strategies, wanted to build software that expanded the usefulness of archiving, secondary storage and data management products he had been using.

Why it's worth watching: Tarmin can help customers archive data that is unchanging and infrequently accessed, which accounts for the "overwhelming majority of corporate data," says Enterprise Strategy Group analyst Lauren Whitehouse. The start-up's software can also help companies comply with various document retention requirements, she says.

Tarmin's "grid-based architecture enables capacity and performance scalability, as well as cost-effectiveness, and its intelligent storage software allows organizations to manage the full life cycle of their information and automate all storage management processes," Whitehouse says.

How company got its name: Tarmin was a minor Star Trek character who was a historian trained in "telepathic memory retrieval."

Funding: $4.6 million

Who's using the product: Tarmin's technology is aimed at small businesses and large enterprises, and users include the city of Safford, Ariz.

WhipTail

Founded: December 2008

Headquarters: Summit, N.J.

What it offers: WhipTail's eponymous appliances provide solid-state disks in capacities of 1.5T to 6TB, with speeds exceeding 100,000 IOPS.

How company got its start: WhipTail is a spinoff of TheAdmins, a reseller that partners with Cisco, Microsoft, VMware and other big IT vendors. The companies share a common management team.

Why it's worth watching: Similar to SandForce, WhipTail uses multi-level cell flash chips normally used in consumer devices, but employs special software to optimize the write cycle. WhipTail says this allows the company to keep prices down and ensure that disks last a minimum of seven years. "They're using multi-level cell and a very smart technique for managing it," says analyst Jim Bagley of Storage Strategies Now.

How company got its name: After whiptail lizards, which are sometimes called racerunners because of their ability to run about 17 mph.

CEO: Ed Rebholz, who is also president and CEO of reseller TheAdmins.

Funding: Privately funded

Who's using the product: Fareportal, Raritan Bay Medical Center and several other mid- to large-size enterprises

Zetta

Founded: January 2008

Headquarters: Sunnyvale, Calif.

What it offers: A cloud storage service backed by a file system with snapshots, replication and other enterprise-class features.

How company got its start: Zetta's top executives had long been consumers of enterprise storage products and generally found themselves unsatisfied, but decided a new cloud storage platform could solve many of the data storage challenges faced by IT shops.

Why it's worth watching: Zetta is trying to compete against Amazon's Simple Storage Service by promising robust enterprise capabilities, such as rapid provisioning and massively scalable capacity; a highly redundant architecture ensuring continuous availability; and easy integration with existing file-based applications. Zetta's co-founders include some of the Web's early innovators: CEO Jeff Treuhaft was one of Netscape's first employees; and vice president of engineering Lou Montulli invented Web cookies and was also an early Netscape employee.

How company got its name: "Zetta" refers to a numerical prefix denoting a "1" followed by 21 zeroes. Industry experts believe the annual amount of digital information created could exceed 1 zettabyte in the next year or two, putting greater strain on storage systems.

CEO: Treuhaft, in addition to his Netscape experience, led the global digital content and messaging business at VeriSign.

Funding: $10.7 million from Sigma Partners and Foundation Capital

Who's using the product: A private beta program included more than 90 customers from industries including financial services, education, entertainment, manufacturing and technology. ■

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GEARHEAD BY MARK GIBBS

The Sentimeter, Part 1

IN ONE OF my June Web Applications newsletters I wrote about a new service called OpenAmplify that had impressed me.

OpenAmplify is a linguistic engine that you present a block of text to analyze through a RESTful API. The service returns the content's semantic indications (called "signals") divided into topics, actions, styles and demographics.

Topic analysis identifies the nouns that are significant and reports their ranking and polarity (the degree of positive or negative bias as shown in the text), along with guidance (a measure of whether advice is being sought or offered), identification of proper nouns and referenced locations.

Action analysis reports on the words that relate to action with measures of decisiveness (how likely the action is to be taken), guidance and temporality (when the action may take place).

Style analysis detects how "flowery" the writing style is and the amount of slang used, while demographic analysis returns measures of the age, gender and education level signals of the text's author or audience.

What got me really excited was using OpenAmplify to analyze social media in which I include not only Twitter, Facebook and all the other usual suspects, but also e-mail and instant messaging.

There's a lot to the API, but here's a simple example of how you could request an OpenAmplify analysis: *http://portaltnx.openamplify.com/AmplifyWeb/AmplifyThis?analysis=all&apiKey=<apikey>&inputtext=<urlencoded_input_text>*

In this request you'd insert your API key value in place of *<apikey>* (you get this key when you sign up, which is free) and the text you want to have analyzed in place of the string *<urlencoded_input_text>* formatted by URL encoding. The returned results are in XML format by default (JSON and DART are also options). The results from a real example are too long to include here but the API documentation has several examples.

What's really cool about this is that instead of submitting URL encoded text you can give OpenAmplify a URL and it will go and fetch the remote content and then analyze and return the results. So, should you be so motivated, you could try this query:

http://portaltnx.openamplify.com/AmplifyWeb/AmplifyThis?apiKey=<apikey>&analysis=all&outputFormat=xml&sourceURL=http%3A%2F%2Fsearch.twitter.com%2Fsearch.atom%3Flang%3Den%26rpp%3D100%26page%3D1%26q%3Diran

This request asks OpenAmplify to fetch a URL, which is in fact another API request for Twitter's search interface and, in this case, instructs it to look for "iran", and analyze that content.

What we get back are all of the OpenAmplify analyses for all of the Twitter content and the various measures for the search term "Iran" will be among them.

A better way to use these services would be to interrogate Twitter for the target search term and then submit just the text of each tweet individually or as a group to OpenAmplify. By analyzing tweets individually you could separate the positive and negative responses for a deeper analysis while the bulk analysis would give you a measure of the sentiment of the Twitter population in general.

This has resulted in a free tool that I'm about to make available as an experiment: The Gibbs Universal Industries Sentimeter, a real-time Twitter sentiment analyzer that I will explain in detail next week. ■

Gibbs in Ventura, Calif., to gearhead@gibbs.com.

ITBESTPRACTICES BY LINDA MUSTHALER

Six things about botnets that will scare you

***NETWORK WORLD* RECENTLY** published a couple of articles about botnets that painted a dire picture of botnets taking over PCs — the ones on corporate networks as well as the ones we use at home.

I wondered just big the botnet problem is and what I learned with a little bit of research is enough to make you want to return to the days of standalone computing. The reality is worse than most people suspect. Here are six things about botnets that will scare your pants off.

1. The process of developing software that creates and controls botnets has reached a professional level. Forget script kiddies that are out for kicks; developers are in it to make a lot of money. The techniques they use to create malware or command and control software are as sophisticated as those used by any commercial software company. What's more, this underground development community is very cooperative — almost like a legitimate open source community. Software is packaged and sold or passed around, and developers add their "personal touches" to create many variants of the malware. Finjan reports that the Golden Cash network operated by cybercriminals provides an exploit toolkit as well as an attack toolkit to distribute malware.

2. Once a PC is on a botnet, the use of that PC can be bought and sold many times. For example, the Golden Cash network is a vast botnet exchange. Cyberthieves purchase malware-infected PCs from anyone in the underground market and then bundle them and resell them to criminals who want to rent the use of a botnet.

3. Botnets use multiple automated propagation vectors to spread including spam, worms, viruses and drive-by download attacks. For instance, legitimate Web sites are often compromised with HTML tags that force a victim's browser to download JavaScript code from a server that's controlled by the attacker. That code can launch a number of exploits against the unsuspecting PC. If any of the exploits is successful, the PC can become the next zombie on the botnet, making it easier than ever for the attacker to collect new nodes on his illicit network.

4. The malware that turns the PC into a bot can hide as a rootkit, making it exceptionally hard to detect and eradicate the malware. The Torpig botnet, as an example, implants Mebroot on the victim PC. Mebroot is a rootkit that replaces the system's Master Boot Record. Therefore, the PC is under the attacker's control even before the operating system loads.

5. Once installed, the malware can attack and nullify the software that is supposed to detect/prevent the malware infection. Intel researchers say botnet developers have begun to target the antivirus, local firewall and intrusion prevention/detection software and services. They identified at least two ways that a botnet blocked the security software from getting updates:

- A botnet changed the local DNS settings of the affected system to disable the antivirus software from reaching its update site.
- A botnet was actively detecting connection attempts to the update site and blocking them.

6. Botnet malware code is often polymorphic; that is, it changes with every new infection. This means that signature-based antivirus software is useless. What's more, the Intel researchers say techniques such as code obfuscation, encryption and encoding further hide the true nature of the code, making it hard for antivirus software to detect it.

It's time to realize what a big threat botnets are to legitimate businesses and organizations. ■

Musthaler is a principal analyst at Essential Solutions Corporation. She can be reached at lmusthaler@essential-iws.com.

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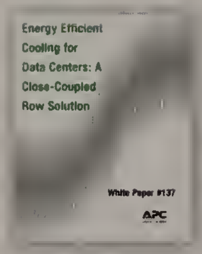
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Cisco IPS 7.0 raises the bar

New global threat correlation feature boosts effectiveness of intrusion-prevention devices **BY JOEL SNYDER**

Cisco is shipping what it claims is the first intrusion-prevention system to correlate IP reputation filtering with signature-based intrusion prevention sensors.

We tested the software upgrade to Cisco's shipping IPS hardware and appliances and found that not only has Cisco increased the value of its IPS in preventing attacks, it has done so in a way that any security manager can easily and intuitively deploy in just minutes.

While there are the rough edges and blank spots you'd expect in any upgrade, Cisco has set the bar pretty high with this release.

When Cisco acquired Ironport in 2007, it got a hidden gem in the deal: SenderBase, which is Ironport's IP address reputation service. SenderBase originally focused on spam sources, but when Ironport moved into the Web security gateway business it refocused SenderBase as a more generic service that addressed spam, malware and viruses.

Cisco has taken the SenderBase technology and created yet another reputation service, Cisco SensorBase, which is accessible in the IPS 7.0 software release. We found that SensorBase is tightly integrated with the IPS and, as our testing shows, actually works.

NETRESULTS

Product	Cisco Intrusion Prevention System v7.0 software
Vendor	Cisco *www.cisco.com*
Price	Free upgrade to existing customers with support agreements.
Pros	Reputation services can block known bad sites; better analysis using reputation information; gave us greater confidence when blocking traffic.
Cons	Some reporting information missing; tools to understand how reputation information is being used not readily available.

SCORING KEY: 5: EXCEPTIONAL; 4: VERY GOOD; 3: AVERAGE; 2: BELOW AVERAGE; 1: SUBPAR OR NOT AVAILABLE.

Security managers can use SensorBase data in two ways. Reputation filtering lets you block all traffic from IP addresses with an extremely bad reputation. This is done regardless of traffic type — all traffic from these sites will be blocked.

This basic use of reputation filters isn't new, but what's interesting is that Cisco will use this reputation data to change the Risk Rating of security events identified by the IPS. In other words, an event linked to a 'bad' IP address will result in an even higher Risk Rating.

Risk Rating is a Cisco-proprietary value, from 0 to 100, that is computed for every event identified by the IPS. Risk Rating lets you prioritize events and decide what to look at and what to ignore.

Prior to IPS 7.0, Risk Rating was computed using six main factors, such as value of the asset being attacked, the danger of the attack, the match between the attack and the target operating system, the quality of the signature and so on. With IPS 7.0, another factor can be thrown into the mix: the reputation of the attacker as determined by Cisco's SensorBase.

Testing Global Correlation Inspection

In Cisco's IPS products, every event has a Risk Rating and the security manager generally defines three bands of risks: low, medium and high. For each of the bands, you can then select a set of actions, from logging that an event occurred to actively blocking all traffic from a particular IP address for some period of time. Risk Ratings aren't new — what's new is the addition of reputation information in 7.0.

Global Correlation Inspection raises the Risk Rating for any event when one of the IP addresses involved has a bad reputation.

The difference between Reputation Filtering and Global Correlation Inspection is pretty important: with Reputation Filtering turned on, an extremely bad reputation of -10 will cause all traffic to be dropped. With Global Correlation Inspection turned on, bad reputations will only cause Risk Ratings of events to be raised.

Global Correlation Inspection is well integrated into the reporting and analysis tools in IPS Manager Express, and we were easily able to see reputation data mixed in with each IPS event. What we couldn't easily see, however, was the effect that reputation data had on the event information. It would have been nice to have a 'before' and 'after' column so we could see what Global Correlation Inspection was doing.

Even with several weeks of work, we found it difficult to understand and get comfortable with Global Correlation Inspection because of a lack of reporting information. Cisco could make the lives of security managers easier by giving them more information about exactly what is going on with each event.

Ultimately, we found that having the reputation information available with every event gave us two significant benefits: it let us deal with events more quickly, and the change in Risk Ratings let us focus on the events that posed the greatest potential threats.

Reputation information in the analysis console turned out to be a great timesaver. Cisco's IPS Manager Express, released in 2008 with IPS software Version 6.1 and included with every IPS sensor, is a huge leap forward from previous IPS and intrusion-detection system management tools from Cisco.

IPS Manager Express handles as many as five sensors and gives

How SensorBase works

Understanding exactly how SensorBase will affect an event's Risk Rating when Global Correlation Inspection is turned on is somewhat complicated. You have to pick a systemwide level, ranging from "permissive" to "standard" to "aggressive." Then, every time an event occurs where the IP address involved has a bad reputation, the Risk Rating will be bumped up by some amount.

Cisco engineers showed us an "internal use only" table that spells out how different reputations (which are on a scale from 0 to -10, with -10 being the worst possible reputation) and different levels selected will affect the Risk Rating, but told us that they don't plan to put this into the documentation quite yet. Their reason is that they wanted the ability to adjust the way the table operates as they gain more experience with combining reputation services and IPS signatures, and as they figure out the "right" increase in Risk Rating for each scenario. *–Joel Snyder*

Testing Reputation Filtering

The traditional way of querying a reputation service database, by DNS queries, wouldn't work in an intrusion-protection system environment. Instead, IPS 7.0 downloads the entire reputation service database and keeps it frequently updated. No additional license is required to use Reputation Filtering, but you must have an active license and Cisco support agreement to turn on downloading.

From there, enabling Reputation Filtering is as simple as checking a single button. There are no thresholds or parameters to set — Cisco told us that no normal site could ever be blocked by Reputation Filtering, because the reputation service score required to block is -10, as bad as it gets.

The IPS 7.0 software does have a "test" button, which lets you see what the IPS would have done, but does not actually block traffic because of reputation services.

We started out, as Cisco recommended, by turning on Reputation Filtering, and quickly ran into one of the weak parts in this new feature: reporting and status information.

Reputation Filtering blocking does not show up as standard IPS events. Instead, the information is aggregated and reported at the bottom of a 10-page obscure text-only report. What is available is network block numbers (such as 94.232.248.0/21, a Russian site hosting such domains as "trustedtablets.com," "ultimatepillstore.com," and "viagracomparison.com") and the number of denied packets from that network block.

What you don't get is any background information on the site being blocked, what address on your network it tried to connect to, or what TCP or UDP port is being probed. This means you can't tell whether this site was simply trying to send you spam or whether a more malicious attack was brewing.

Alternatively, you can see a report that presents a bar chart showing how many packets have been blocked by Reputation Filtering, but it was one of the least informative uses of a bar chart that we've ever seen.

Over the two week test period, we didn't see a huge number of denied packets — an average of about one per minute, or 1,500 a day. If the Reputation Filtering is simply taking some of the load off of your antispam gateway, 1,500 blocked connections a day isn't worth much — the site we tested Reputation Filtering with is already blocking about 400,000 connections a day using reputation services with an antispam gateway.

On the other hand, if the traffic coming in isn't spam, that adds up to a serious number of probable attacks each day. Remembering that these packets were seen behind the firewall; in other words, after all the usual port scans and invalid connects were filtered out. So, the Cisco IPS certainly blocked a lot of traffic that the firewall let through.

Our testing didn't turn up any false positives. We randomly picked 25 networks blocked by the Reputation Filtering and investigated each one, searching the Internet for reasons that the network blocks were listed and our own logs to see if these blocks had made legitimate connections in the recent past. We concluded that each one of them should have been blocked and that there were no legitimate users on the blocked networks. *–Joel Snyder*

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competitive products from Juniper and Sourcefire some significant competition. Even with the benefits in IPS Manager Express, we found that we were frequently referring to the reputation data included with each event to help understand which needed to be looked at and which could be ignored.

For example, one day we had 72 events that the Cisco IPS had identified as an attempt to use Web servers on our network as HTTP proxies. Of those 72 events, 71 came from addresses with fairly bad reputations: -3.8 and -5.5. Because we're pretty confident that the Web servers are configured correctly, we ignored those events as normal probes for misconfigured Web servers.

However, one of the events came from an address without a bad reputation. We investigated and found one of our own users with a misconfigured laptop on the road. Without the reputation service, we never would have investigated any of the events, but because one event stood out, we not only investigated the problem but also resolved a configuration issue.

The second benefit to come out of combining reputation services with IPS events was the variation in Risk Rating. We saw significant numbers of events with modified Risk Ratings because of negative reputation. In a 100-hour period, 11% of the high and medium severity events had their Risk Ratings bumped up because of negative reputation — almost 2,000 events. By sorting based on Risk Rating within each event type, we were drawn to the events that the IPS thought posed the greatest risk.

One benefit we hoped to see out of reputation services was increased confidence in IPS connection blocking and also IPS punitive blocking, sometimes called shunning. Most IPS products have an option to turn on punitive blocking. Most security managers don't use it, however, because of the potential for false positives and self-inflicted denial-of-service attacks.

We hoped that negative reputation would make us confident enough in what the IPS was telling us to be more aggressive about the blocking features. That's certainly Cisco's marketing message: Because the Risk Rating is increased, you can easily select a different set of actions for the same event with different Risk Ratings, such as alerting on low risk ratings and blocking connections on higher risk ratings.

We found out that reputation-based Risk Ratings are not a magic bullet. The false positives we have seen in the past with some of Cisco's rules were no different with SensorBase input. Adding reputation information let us have a wider variety of actions for the same event type, but the primary responsibility for ensuring that we weren't dropping good traffic still falls on the network manager.

We did eventually set up different actions for different Risk Ratings, but only after running the IPS for two weeks with blocking set to audit mode and looking at all the high risk alerts generated.

In one sense, risk ratings represent a limiting factor in how the security manager deals with reputation information. In the version we tested, the only way that reputation information influences the action taken on an event is by boosting the Risk Rating. You can't look directly at reputation information and other data and take action. For example, there's no way to say "for any event on Port 80 to our Webmail server, block the traffic if the reputation is less than -2".

Our testing showed, however, that there are significant benefits to the security manager that come from combining IPS event data with reputation information using Cisco's Global Correlation Inspection.

On the analysis side, we found ourselves focusing on the most important data when reputation information was available. On the configuration side, reputation data added to a carefully configured IPS that let us use features such as blocking with greater confidence.

The result is that Cisco IPS 7.0 continues to increase the value of the IPS in providing security visibility as well as threat mitigation. ■

■ **GO ONLINE** to see how we conducted the test: ***http://tinyurl.com/lw4ocg***

Snyder, a Network World Test Alliance partner, is a senior partner at Opus One in Tucson, Ariz. He can be reached at Joel.Snyder@opus1.com.

IBM BladeCenter HS22 delivers

A virtualization-ready combo of performance, energy efficiency and manageability **BY JOHN BASS**

Optimizing power consumption, CPU performance and form factor is a never-ending battle in server design and IBM's BladeCenter HS22 succeeds on all counts.

The HS22 that we tested came with two eight-core Intel 5570 Nehalem processors, two 10Gigabit Ethernet network interface cards, 50GB SSD drives, 150GB 15k hard drives and 48GB of RAM.

Intel claims improved performance and power consumption with their new Nehalem processors, so we tested the HS22 against an IBM HS20 blade with Intel Core-based processors. The Nehalem-based blade delivered a 10X increase in performance, while the amount of energy per transaction was only 12% of the Core-based Xeon processor.

NETRESULTS

Product	BladeCenter HS22 Blade
Vendor	IBM *www-03.ibm.com/bladecenter/hardware/servers/hs22/index.html*
Price	$10,476 as tested
Pros	Fast and energy-efficient CPU, strong management offerings.
Cons	Long boot times for non-UEFI boot images.
Score	4.1

SCORECARD

Action	Weight	Score
Performance	30%	4
Features	20%	4
Energy efficiency	20%	4
Manageability	20%	4.5
Documentation	10%	4
Total score		4.1

SCORING KEY: 5: EXCEPTIONAL; 4: VERY GOOD; 3: AVERAGE; 2: BELOW AVERAGE; 1: SUBPAR OR NOT AVAILABLE.

In terms of total power consumption, the Nehalem processors consumed 17% more power than the Xeon-based system, but that's a pretty good bargain when you're gaining a 10X boost in performance.

IBM claims that solid state drives (SSD) are desirable because of their increased power efficiency as compared with conventional rotating spindle hard drives.

We compared the power consumption of the two drive types in the HS22 and found that the SSDs use 5 watts less power at idle than a conventional spindle drive and 5 watts less power under load.

However, spindle drives can sustain 37% more bandwidth with writes than SSDs. This translates to 30% more energy consumed per megabyte written for the SSDs than for the conventional spindles. In other words, spindles are more efficient than SSDs for high I/O rates; SSD drives are a better choice if the drives aren't under heavy load.

Our 10G Ethernet tests showed good network and I/O performance with a peak of 8Gbps and a sustained rate of 7Gbps of HTTP traffic out of the server. The 10Gbps daughter card in our HS22 has two 10G Ethernet ports. The onboard 1G Ethernet ports remain active with the 10G Ethernet card in place.

The 10G Ethernet ports are accessible from the rear of the BladeCenter chassis via a 10G Ethernet switch or a 10G Ethernet pass-through module. The pass-through module allows direct connection to a blade's 10G Ethernet port from outside the chassis. We conducted all our tests with the 10G Ethernet switch in place. The chassis has 10G option slots for a choice of connection methods to the two internal blade 10G ports if installed.

The HS22 makes a great virtualization platform because of the Nehalem processor, which implements Intel's virtualization technology, and for the large RAM capacity. This hardware combination opens the possibility of running many virtual machines (VM) on the blade.

There are four categories of management for the HS22 — hardware/firmware, resource management, platform management and enterprise management. Each category has a set of management tools and a loose definition.

The hardware/firmware category refers to the hardware and firmware configuration and revision management. There is a Web interface for the network attached power distribution unit, the advanced management module for the blade chassis and the I/O modules such as the 10G Ethernet switch in the chassis.

These Web interfaces provide a means to configure and manage these elements — including a remote video console for viewing the operating system video output through the chassis management module. No external software tools are needed.

The HS22 uses unified extensible firmware interface (UEFI) instead of BIOS. This gives more flexibility for configuration and management of the blade because access to components isn't restricted by the limits of BIOS. If an operating system doesn't support UEFI, the system will boot into a 'legacy mode,' which operates like BIOS to support the non-UEFI operating system. With legacy mode, the boot time is effectively doubled. Because most all hypervisors are not UEFI aware, hypervisor boot times are very long.

The resource management category refers to the ability to configure systems level items. IBM provides a Web site called toolscenter, which provides access to a suite of tools that operate at the resource management level.

Platform management eases the management of multiple blades. Management at this level is implemented by IBM Systems Director. Basic tools such as system discovery, firmware and software management, and system availability monitoring are included for free. Other plug-ins to Systems Director, such as virtualization management and energy configuration, can be purchased.

The highest management category, called enterprise management, is implemented by IBM's Tivoli, which is available for a fee. Tivoli was not used in this review. We found the management platforms to be comprehensive, easy to use and efficient.

It is worth noting that IBM does a good job with backward compatibility. The HS22 will work in a 6-year-old chassis with no problems. The blade is easy to install and remove from the chassis. Once removed, the blade cover can be removed without tools to expose the internal components.

The HS22 is a well-designed blade that's easy to use with lots of management tools. The Nehalem processor performance and energy efficiency is astounding. The 10G Ethernet networking performed as expected. Finally, the combination of Nehalem processors, 10G Ethernet, and lots of RAM make the HS22 a great choice for virtualization. ■

Bass is the technical director of NEXT Services, an IT extension service of North Carolina State University. He can be reached at john_bass@ncsu.edu. Michael Brown, NEXT Services Engineer, assisted with the testing. He can be reached at msbrown3@ncsu.edu.

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CLEAR CHOICE TEST **BLACKBERRY ENTERPRISE SERVER 5.0**

Smart choice for mobile rollouts

New software offers powerful Web-based admin tools, high-availability

BY ROB SMITHERS

Many factors enter in when a user chooses between a BlackBerry, an iPhone or another device — there's coolness, cost, cachet, ease of use, features, apps. But for IT execs deploying a fleet of mobile devices, it's all about management.

We tested Research in Motion's BlackBerry Enterprise Server 5.0 and found that it's an easy-to-use, Web-based tool that provides centralized administration, high availability and the ability to set rules and policies on a granular level.

There are two deployment options: an upgrade or a new installation. We had BES v4.1.4.15 running already, so we used the new BES Transporter Tool to complete a seamless migration. We also did an out-of-the-box installation the same way a new enterprise customer would.

On a scale of 1 to 10 (10 being the best), we give the BES Transporter Tool a 9. Our migration, with five users, took less than 30 minutes.

BlackBerry Administration Service provides Web-based administration access, with easy navigation tools that let administrators perform all tasks from one centralized location.

With Administration Service, an admin can publish and push updates and applications to one user or groups of users. The administrator can also identify unauthorized applications and prevent users from downloading, using or updating prohibited programs or applications. When a BlackBerry device is activated, the new security policy supersedes any previously installed programs or policies.

The prior version of BES featured BlackBerry Manager, a thick-client, desktop-based application that limited the flexibility of IT administrators. The new Administration Service offers more flexibility, allowing administrators to monitor and control the smartphone network through the Internet Explorer Web browser.

With BES 5, administrators can tailor and customize roles, skills and permissions, creating different levels of access to the server for limited administrative roles, such as password reset, activate new user and edit security policies.

The console is streamlined; the administrator can not only customize by skill sets, but partition to different classes of users. Users can belong to multiple groups, and groups can belong to other groups. When a user is moved to another group, the user automatically inherits the settings of that group.

You can also schedule all administration tasks, policy updates and applications during low-traffic time and not impact users. There are multiple levels of built-in security policies available, or you can customize a policy to meet your needs. Though these features were available in the previous release, the applications are well structured and intuitive, easier to administer, and can be found in one location.

BES 5 provides increased visibility into the network. We noted the improved color-coded monitoring alerts, and easily identified the server- and user-related issues and status. The administrator can view reports on issues affecting the performance of the BES server, which ensures uninterrupted service to the users.

The Threshold Assistance Tool provides monitoring help, allowing IT to set acceptable threshold levels.

The high-availability feature supplies fast recovery from unplanned downtime. With the 1-tol high availability option, BES 5 provides an automated process tailored to your network or business needs. The administrator can force an upgrade or perform maintenance on either server, or this procedure can be an automatic scheduled event. Each administrator can define what network conditions would initiate failover, with little or no disruption to the user. You can set preferences based on your network environment requirements.

During testing we found that when manually triggered, the standby server takes over the load with little to no user interruption. The automated failover is dependent on the individual preferences set, but the process performed in the same fashion whether automatic or manually triggered.

BlackBerry Device Software v5.0 is scheduled to be available in late 2009. We reviewed the smartphone features currently available on the Web Desktop. With the new e-mail folder management, we were able to browse, add, rename, delete and move folders. Through the Web Desktop users can now granularly filter and select which e-mails are to be delivered to their BlackBerry device. We were able to organize and flag e-mails that require follow-up with the use of flags, similar to Microsoft Outlook.

With its advanced Web-based features, upgrading to BES 5 could increase productivity for both the IT administrator and smartphone device users. ■

Smithers is CEO of Miercom. With more than 20 years of testing experience, he has worked in testing, consulting and network planning as well as hands-on implementations of converged networks. He can be reached at rsmithers@miercom.com.

NETRESULTS

Product	BlackBerry Enterprise Server 5.0
Vendor	Research in Motion *www.blackberry.com*
Price	$4,000 (20-client license)
Pros	High availability failover option at no additional cost. VMware compatible. Easy to migrate users, centralized Web-based management.
Cons	Supports only Internet Explorer 6.0 and 7.0 browsers. Only one administrative access can be created during installation. If this account is corrupted or misconfigured, there is no way to access and administer the BES Administration Server.
Score	4.28

SCORECARD

Action	Weight	Score
Performance/ installation	25%	4.3
Management	25%	4.5
Enterprise features	25%	4.2
Interoperability	25%	4.1
Total score		4.28

SCORING KEY: 5: EXCEPTIONAL; 4: VERY GOOD; 3: AVERAGE; 2: BELOW AVERAGE; 1: SUBPAR OR NOT AVAILABLE.

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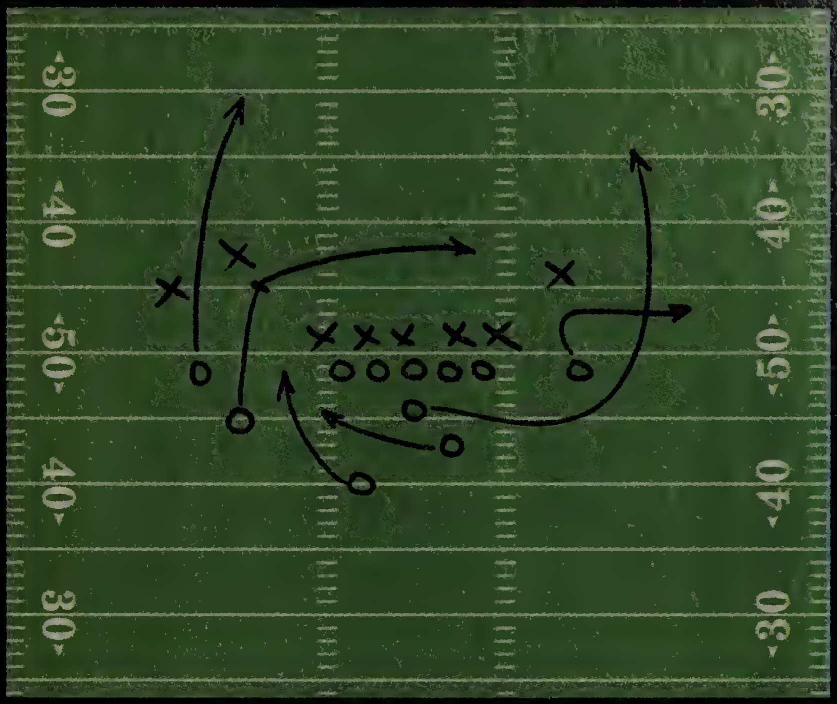

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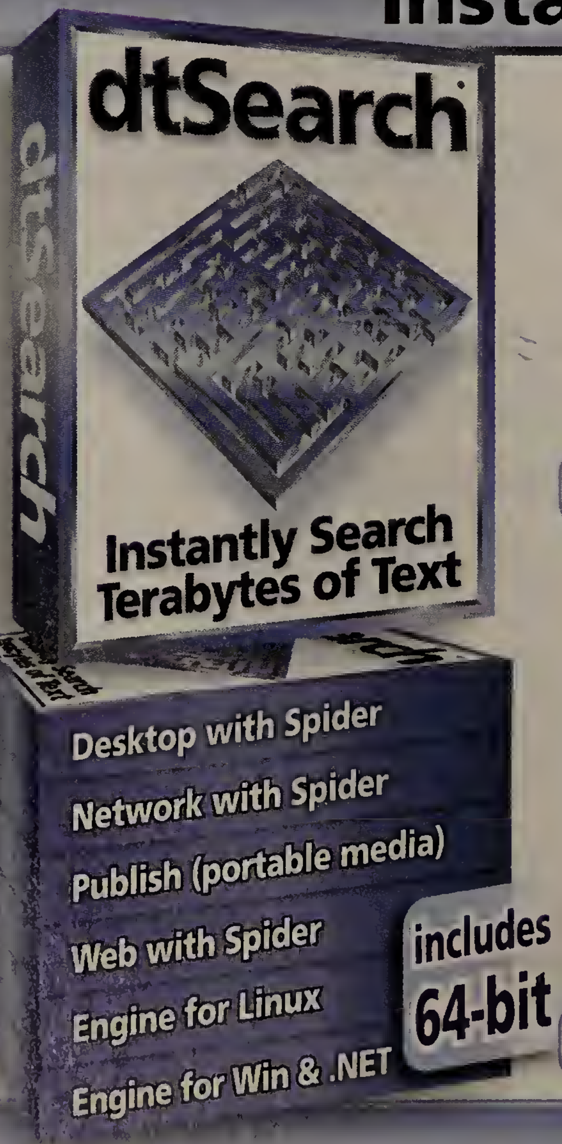

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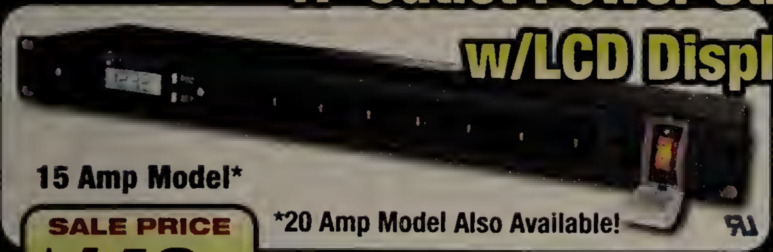

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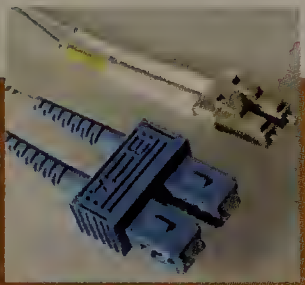
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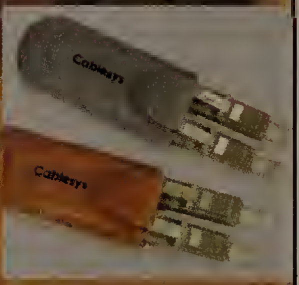
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Periodical postage paid at Framingham, Mass., and additional mailing offices. Posted under Canadian International Publication agreement #PM40063731. Network World (ISSN 0887-7661) is published weekly except for the following months: March, May, June, July, August, September, November, December. Issues combined are as follows: 3/30-4/06, 5/25–6/01, 6/8–6/15, 6/22–6/29, 7/6–7/13, 7/20–7/27, 8/3–8/10, 8/17–8/24, 8/31–9/7, 9/21–9/28, 11/30–12/07 and 12/28–1/4/10 by Network World, Inc., 492 Old Connecticut Path, Framingham, MA 01701-9002. **Network World** is distributed free of charge in the U.S. to qualified management or professionals. To apply for a free subscription, go to www.subscribenw.com or write Network World at the address below. No subscriptions accepted without complete identification of subscriber's name, job function, company or organization. Based on the information supplied, the publisher reserves the right to reject non-qualified requests. Subscriptions: 1-877-701-2228. Nonqualified subscribers: $5.00 a copy; U.S.—$129 a year; Canada—$160.50 (including 7% GST, GST#126659952); Central & South America—$150 a year (surface mail); all other countries—$300 a year (airmail service). Four weeks notice is required for change of address. Allow six weeks for new subscription service to begin. Please include mailing label from front cover of the publication. Network World can be purchased on 35mm microfilm through University Microfilm Int., Periodical Entry Dept., 300 Zebb Road, Ann Arbor, Mich. 48106. **PHOTOCOPYRIGHTS:** Permission to photocopy for internal or personal use or the internal or personal use of specific clients is granted by Network World, Inc. for libraries and other users registered with the Copyright Clearance Center (CCC), provided that the base fee of $3.00 per copy of the article, plus 50 cents per page is paid to Copyright Clearance Center, 27 Congress Street, Salem, Mass. 01970. **POSTMASTER:** Send Change of Address to Network World, P.O. Box 3090, Northbrook, IL 60065. Canadian Postmaster: Please return undeliverable copy to PO Box 1632, Windsor, Ontario N9A7C9. Copyright 2009 by Network World, Inc. All rights reserved. Reproduction of material appearing in Network World is forbidden without written permission. Reprints (minimum 500 copies) and permission to reprint may be purchased from Reprint Management Services at (717) 399-1900 x128 or networkworld@reprintbuyer.com. USPS735-730

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Network World, Inc.

492 Old Connecticut Path,
Framingham, MA 01701-9002
Phone: (508) 766-5301

To Send E-Mail to NWW Staff
firstname_lastname@nww.com

CEO: Mike Friedenberg
SVP, CHIEF CONTENT OFFICER: John Gallant
GROUP PUBLISHER: Bob Melk
PUBLISHER: Andrea D'Amato

Online Services
VP/SALES: Brian Glynn
MANAGER, ONLINE ACCOUNT SERVICES: Danielle Tetreault

Custom Solutions
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Finance
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Human Resources
SVP HUMAN RESOURCES: Patricia Chisholm

Circulation/Subscription
CIRCULATION MANAGER: Diana Turco, (508) 820-8167

IDG List Rental Services
DIRECTOR OF LIST MANAGEMENT: Steve Tozeski
TOLL FREE: (800) IDG-LIST (US only)/Direct: (508) 370-0822

Sales

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Southeast/Mid-Atlantic
REGIONAL ACCOUNT DIRECTOR: Jacqui DiBianca, (610) 971-0808, FAX: (201) 621-5095

Northern California/Northwest
PUBLISHER: Andrea D'Amato, (508) 766-5455

Silicon Valley/Southwest
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Marketplace/Emerging Markets–National
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BACKSPIN BY MARK GIBBS

Cybersecurity: Curiouser and curiouser

I AM A huge fan of Lewis Carrol's "Alice" stories which are some of the greatest fantasies of all time (by the way, Disney is working on a movie based on the books that looks fantastic and, with Tim Burton directing, perhaps Disney won't "Hollywoodize" the story like it did with the 1951 cartoon).

Anyway, one of the many memorable scenes from Alice can be found in "Through the Looking Glass", Chapter V, "Wool and Water", wherein Alice is talking to the White Queen: "There's no use trying," [Alice] said, "one ca'n't [sic] believe impossible things."

"I daresay you haven't had much practice," said the Queen. "When I was your age, I always did it for half-an-hour a day. Why, sometimes I've believed as many as six impossible things before breakfast."

I bring this up because there was a time a few months ago when many people believed in six impossible things about the proposed cybersecurity office of the Obama administration: 1) it would actually be able to get beyond the talking about it phase; 2) it was possible to get government agencies to allow another agency to drive their IT; 3) an implementable cybersecurity strategy could be defined; 4) such a plan could actually be put in place in a meaningful time frame; 5) the funds necessary to implement this strategy could be found; and 6) anyone who took the job could survive the politics.

In short, people believed in these things not before breakfast but before taking office. They even believed them for a while afterwards. But now, not so much. Proving my point, last week, Melissa Hathaway, Obama's acting cybersecurity chief since February 2009, announced her resignation, claiming it was for "personal reasons."

Hathaway was a fantastic candidate for the job, boasting an excellent and relevant resume. But really, what chance did she have? The issues of cybersecurity are hard for non-IT people in general and politicians in particular to understand, and the consequences of implementing a real strategy are a political nuclear bomb.

According to the *Wall Street Journal*, "People familiar with the matter said Ms. Hathaway has been 'spinning her wheels' [and that] the president's economic advisers sought to marginalize her politically [...] after she said it should consider options for regulating some private-sector entities to ensure they secure their networks".

Can you imagine the political pressure from the financial community, law enforcement and the medical industry against having to comply with a whole new collection of IT-related regulations and having to undergo heavens knows what kind of audits? And I bet the pushback from commercial concerns was a walk in the park compared with the civil service in-fighting.

As Hathaway wrote in a blog on May 29: "Protecting cyberspace requires strong vision and leadership and will require changes in policy, technology, education, and perhaps law ... We are late in addressing this critical national need and our response must be focused, aggressive, and well-resourced." These words seriously understated the scope of the challenges that faced her and her successor should anyone be crazy enough to attempt the job.

In *Alice's Adventures in Wonderland*, Chapter VI, "Pig and Pepper", the Cheshire Cat disappears starting with its tail leaving nothing but its smile and Alice comments: "...a grin without a cat! It's the most curious thing I ever saw in all my life!"

Paraphrasing Alice we might say something along the lines of, "a White House office for cybersecurity without a head! It's the most curious thing I ever saw in all my life!" ■

Gibbs dances a quadrille in Ventura, Calif. Send your little Bill to backspin@gibbs.com.

NETBUZZ BY PAUL McNAMARA

Unreliable is a tough reputation to shake

TWITTER USED TO be down so often it made the site's "fail whale" famous enough to be profiled in *The New York Times*. However, as Twitter's popularity has exploded and the hoopla surrounding it has become overbearing, the fledging company has gotten its uptime act together.

But last Thursday was an exception. In this case, a denial-of-service attack was the culprit, but to the Twitter community and its ever-more-vocal critics, this was just one more example of the company not living up to its hype.

Wrote one blogger: "Twitter is down! This seems to be happening more, recently, than in the last several months. What's going on, guys? It's going to be tough to become the next AT&T if you're dead at 9 a.m. on a Thursday."

Many of the early headlines about the outage carried the word "again."

While the data doesn't support the suggestion that Twitter downtime is happening more often, the impression does show how difficult it can be for a company to shake a bad reputation.

According to the Web monitoring company Pingdom, this was Twitter's first outage of more than five minutes since June 16. Over the past six months, the site has had just less than eight hours of downtime for an uptime record of 99.8%.

Pingdom first flagged Twitter's improved uptime performance in a report released last February that noted the site had 84 hours of downtime in 2008, the worst performance among 15 social networking companies. "A full 84 percent of Twitter's downtime came during the first half of 2008, when the service was still struggling with stability issues," Pingdom wrote. "July and onward has seen a significant improvement for the service."

That improvement continued through the first seven months of 2008, Thursday's nearly three-hour, attack-related outage notwithstanding.

Twitter is back up (if not exactly humming) as I type. What will take a while longer, apparently, is for the company to recover its reputation.

'I now pronounce you monetized'

If there's anything worse than a fabulous YouTube video being pulled offline over a copyright beef it might be a content creator not being fairly compensated for the use of his or her efforts. (Hey, consider my line of work.)

So it's kind of cool to see both sides win in the case of "Jill and Kevin's Big Day" wedding video vs. Chris Brown's hit recording "Forever." (If you haven't seen the video, head for YouTube; we'll wait.)

What great fun ... at least until the video went hyper-viral and accumulated more than 10 million views in less than a week. It rocketed to the tops of social media sites such as Digg and Reddit. The wedding party participants were instant TV morning-show stars, too. ... But Chris Brown had yet to be heard from.

An in-house YouTube blogger explains what happened next:

"At YouTube, we have sophisticated content management tools in place to help rights holders control their content on our site. The rights holders for 'Forever' used these tools to claim and monetize the song, as well as to start running Click-to-Buy links over the video, giving viewers the opportunity to purchase the music track on Amazon and iTunes. As a result, the rights holders were able to capitalize on the massive wave of popularity generated by 'JK Wedding Entrance Dance' — in the last week, searches for 'Chris Brown Forever' on YouTube have skyrocketed, making it one of the most popular queries on the site."

And everyone lives happily ever after. ■

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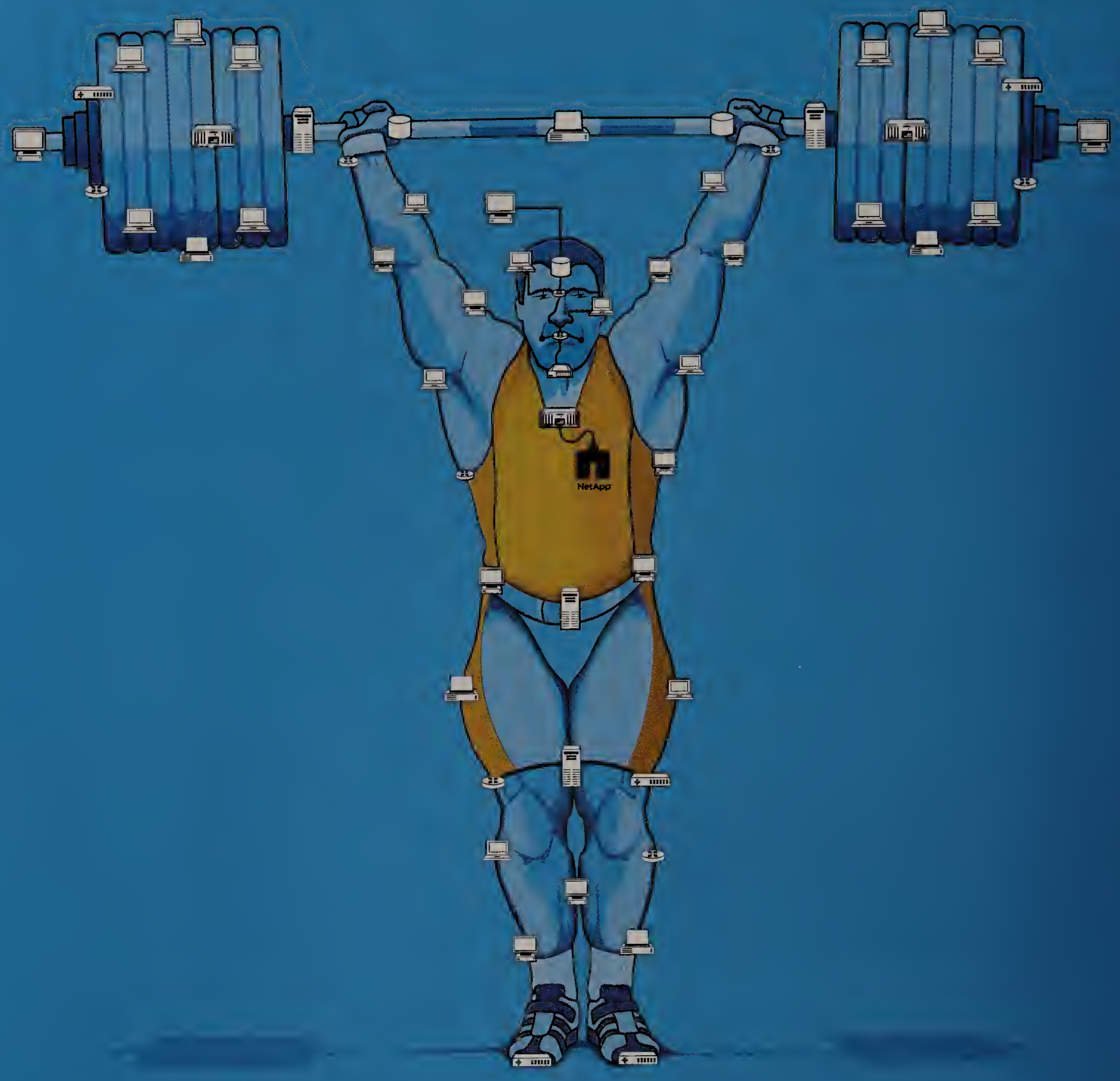

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